



RF TEST REPORT

Product Name: Vasco Translator M4

Model Number: VEM4KA, VEM4PA, VEM4MA

Issued For : Vasco Electronics S.A.

Al. 29 Listopada 20, 31-401 Kraków, Poland

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Zhenxiong Industrial Park,
No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan
District, Shenzhen, Guangdong, China

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TEST REPORT CERTIFICATION

Applicant: Vasco Electronics S.A.

Address: Al. 29 Listopada 20, 31-401 Kraków, Poland

Manufacturer: Fansike Technology (Shenzhen) Co., LTD

Address: D1401-2, Building D, Phase 2, Galaxy WORLD, Minle community,
Minzhi Avenue, Longhua District, Shenzhen

Product Name: Vasco Translator M4

Trademark: VASCO

Model Number: VEM4KA, VEM4PA, VEM4MA

Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
MIC Notice No.88 Appendix No.86, MIC Notice No.88 Appendix No.82, MIC Notice No.88 Appendix No.75, Article 2 Paragraph 1 of Item 11-19, Annex 86, Article 2 paragraph 1 item 11-21, Article 2 Paragraph 1 of Item 21-3, Annex 82, Article 2 Paragraph 1 of Item 54, Annex 75	PASS

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Revision History

Rev.	Issue Date	Contents
00	Jan. 20, 2026	Initial Issue



1. SUMMARY OF TEST RESULTS

1.1 TEST RESULTS DESCRIPTION AND LABORATORY INFORMATION

MIC Notice No.88 Appendix No.86, MIC Notice No.88 Appendix No.82, MIC Notice No.88 Appendix No.75, Article 2 Paragraph 1 of Item 11-19, Annex 86, Article 2 paragraph 1 item 11-21, Article 2 Paragraph 1 of Item 21-3, Annex 82, Article 2 Paragraph 1 of Item 54, Annex 75 Rules Section	Description of Test	Result
2	Vibration Test	PASS
3	Temperature And Humidity Test	PASS
4	Frequency Tolerance	PASS
5	Occupied Bandwidth	PASS
6	Unwanted Emission strength	PASS
7	Adjacent channel leakage power	PASS
8	Output Power and Output Power Tolerance	PASS
9	Leakage Power At No-Carrier Transmission	PASS
10	Secondary Radiated Emission Strength	PASS
11	System Operation Test	PASS
12	Antenna Gain	PASS
13	Construction Protection Confirmation	PASS
14	Carrier Sensing Function	PASS
15	Identification code	PASS
16	Frame Construction	PASS
17	Intermodulation Characteristic	PASS



1.2 TEST LABORATORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China

1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

No.	Item	Uncertainty
1	RF Output Power, Conducted	$\pm 0.71\text{dB}$
2	Conducted emission	$\pm 2.80\text{dB}$
3	Temperature	$\pm 0.5^\circ\text{C}$

Note: The measurement uncertainty is not included in the test result.



2. GENERAL INFORMATION

2.1 TECHNICAL SPECIFICATIONS AND REGULATIONS

2.1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Name:	Vasco Translator M4
Test Model Number:	VEM4KA
Series Number:	VEM4PA, VEM4MA
Model Difference:	Only color difference.
Hardware version:	G252_MB_V02
Software version:	G252_VEM4KA_FW_V01
Frequency Bands:	LTE Band 1: 1920MHz-1980MHz LTE Band 3: 1710MHz-1785MHz LTE Band 5: 824MHz-845MHz LTE Band 8: 900MHz-915MHz LTE Band 19: 830MHz-845MHz LTE Band 21: 1427.9MHz-1462.9MHz LTE Band 28: 718MHz-748MHz LTE Band 38: 2570MHz-2620MHz LTE Band 39: 1880MHz-1920MHz LTE Band 40: 2330MHz-2370MHz LTE Band 41: 2545MHz-2655MHz
Antenna Type:	PIFA
Antenna Gain:	LTE B1: 2.1dBi, LTE B3: -1.6dBi, LTE B5: -4.6dBi, LTE B8: -3.9dBi, LTE B19: -5.3dBi, LTE B21: -0.5dBi, LTE B28: -4.6dBi, LTE B38: -0.2dBi, LTE B39: 0.5dBi, LTE B40: 2.0dBi, LTE B41: 1.1dBi
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as single chipset, SIM 1 is used to tested.
Rating:	Input: DC 5V 1.5A
Battery:	Capacity: 2000mAh Rated Voltage: 3.85V



2.2 TEST CONDITIONS

The LTE module was tested while in a continuous transmitter/receiver mode.

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in all Modes to determine worst case levels.

Power Supply Voltage Fluctuation Test

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input AC Power(V)	/	/	/
Uart Input DC Power(V)	3.85	4.235	3.465
RF Chip Input DC Power(V)	3.300	3.326	3.282
Voltage Variation (%)	/	0.79	-0.55

Voltage Variation (%)

= (Output high or Low Voltage -Output Normal Voltage)/ Output Normal Voltage* 100

When the input supply voltage to the EUT from the external power source is varied by +/- 10%, the output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations.

2.3 TEST ENVIRONMENTAL

During the measurement the environmental conditions:

Normal Temperature: 24.5°C

Relative Humidity: 53 %

Air Pressure: 101.78 kPa

2.4 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

2.5 CONFIGURATION OF EUT SYSTEM

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

E-1
EUT

Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	Brand No.	Note
N/A	N/A	N/A	N/A	N/A

Note: All the accessories have been used during the test. the following "EUT" in setup diagram means EUT system.



2.6 MEASUREMENT INSTRUMENTS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until	Classification
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2025.03.05	2026.03.04	(c)
Spectrum Analyzer	Keysight	N9020A	MY52510057	2025.03.05	2026.03.04	(c)
Wireless Communications Test Set	R&S	CMW 500	137737	2025.03.05	2026.03.04	(c)
Temperature & Humidity	BT-3	JINGCHUANG	N.A	2025.03.10	2026.03.09	(c)
Temperature & Humidity test chamber	AISRY	LX-1000L	171200018	2025.07.30	2026.07.29	(c)
Attenuator	eastsheep	90db	N.A	2025.03.06	2026.03.05	(c)
DC source	Keysight	E3634A	MY58036468	2025.03.06	2026.03.05	(c)
Vibration tester	STI	DC-600-6	/	2025.07.30	2026.07.29	(c)
Digit Multi-meter	FLUKE	F101	/	2025.03.10	2026.03.09	(c)

Remark:

(a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph(1) in JRL.

(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).

(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1). (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c).

From JRL Article 24-2, paragraph 4, Item 2

Notice: Calibration duration for above equipments is 1 year.

Test Equipment Calibration

All of the test equipment is effective use and calibration certification institution, LISAI, the address is No.8.South Street Shi li institute Guangzhou.Guangdong.China

2.7 MEASUREMENT RESULTS EXPLANATION EXAMPLE

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF Cable Loss + Attenuator Factor.



3. ANTENNA OUTPUT POWER, POWER TOLERANCE AND ANTENNA GAIN

3.1 LIMIT

Article 2 Paragraph 1 of Item 11-19 & Item 21-3& Item 54& Item 11-21

FD-LTE, Land mobile Station:

Antenna Power 200mW

the antenna power tolerance within +87%~-79% for other than MIMO system. The antenna gain less than 3dBi.

Digital Cordless Telephone in TD-OFDMA method:

Antenna Power:

Master unit:100mW (OBW: 1.4MHz),200mW (OBW: 5MHz)

the antenna power tolerance within +87%~-47% for other than MIMO system. The antenna gain less than 4dBi.

Slave unit: 100mW

the antenna power tolerance within +87%~-79% for other than MIMO system. The antenna gain less than 4dBi.

TD-LTE (AXGP) Land Mobile Station:

Antenna Power 0.4W or less (The sum of the values of each connector)(The total of antenna power of multiple carrier waves (Carrier Aggregation): 0.2W or less)

the antenna power tolerance within +87%~-79% for other than MIMO system. The antenna gain less than 4dBi.

TD-LTE, Land mobile Station:

Antenna Power 0.2W or less

the antenna power tolerance within +87%~-79% for Band 2010~2025MHz. The antenna gain is 0dBi or less.

the antenna power tolerance within +100%~-79% for Band 3400~3600MHz. The antenna gain is 3dBi or less.

3.2 MEASUREMENT METHOD

According to ts-136 521-1: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing. The initial test configurations consist of test frequencies, and channel bandwidths based on E-UTRA bands. specified in table:

Test Parameters For Channel Bandwidths				
DownLink Configuration		UpLink Configuration		
CH BW	N/A for Max UE output power testing	Mode	RB Allocation	
			FDD	TDD
3M		QPSK	1	1
3M		QPSK	4	1
5M		QPSK	1	1
5M		QPSK	8	8
10M		QPSK	1	1
10M		QPSK	12	12
15M		QPSK	1	1
15M		QPSK	16	16
20M		QPSK	1	1
20M		QPSK	18	18

Note 1: Test Channel Bandwidths are checked separately for each E-UTRA band, the applicable channel bandwidths are specified in Table 5.4.2.1-1.

Note 2: For E-UTRA bands not applied with Note 2 in Table 6.2.2.3-1:

- The 1 RB allocation shall be tested at RB#0 for low and mid range, RB #max for high range test frequency.

- The RBstart of non-1RB allocation shall be RB #0 for low and mid range, RB# (max +1 - RB allocation) for high range test frequency.

Note 3: For E-UTRA bands applied with Note 2 in Table 6.2.2.3-1:

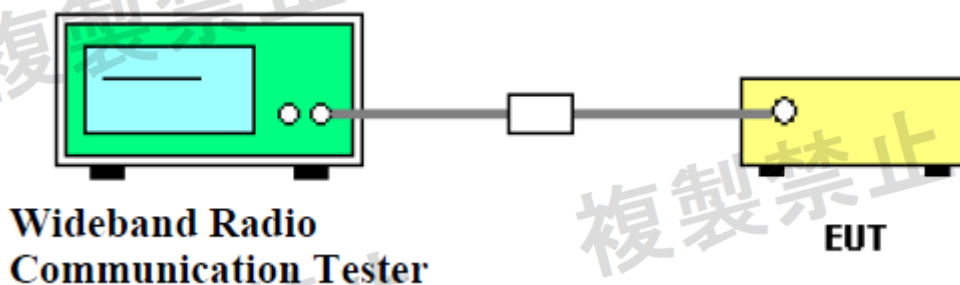
- If the test channel bandwidth is larger than 4MHz, then the 1 RB allocation shall be tested at both



RB #0 and RB #max.

- If the test channel bandwidth is smaller or equal to 4MHz, then the 1 RB allocation shall be tested at RB #0.
- If the test channel bandwidth = (FUL_high - FUL_low) specified by the operating band, then only one frequency range shall be tested and the 1 RB allocation shall be tested at RB #0, RB # [NRBUL/ 2] and RB #max.
- For non-1RB allocation, test frequency is middle range, and the RBstart shall be RB #0.

3.3 TEST SETUP



3.4 TEST PROCEDURES

1. SS sends uplink scheduling information for each UL HARQ process via PDCCH DCI format 0 for C_RNTI to schedule the UL RMC according to Table. Since the UE has no payload and no loop-back data to send the UE sends uplink MAC padding bits on the UL RMC.
2. Send continuously uplink power control "up" commands in every uplink scheduling information to the UE; allow at least 200ms for the UE to reach PUMAX level.
3. Measure the mean power of the UE in the channel bandwidth of the radio access mode. The period of measurement shall be at least the continuous duration of one sub-frame (1ms). For TDD slots with transient periods are not under test.

3.5 TEST RESULTS

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



4. FREQUENCY TOLERANCE AT VOLTAGE FLUCTUATION, ENVIRONMENT AND VIBRATION CONDITION

4.1 LIMIT

Article 2 Paragraph 1 of Item 11-19: $\pm (0.1 \times f \times 10^{-6} + 15)$ Hz

Article 2 Paragraph 1 of Item 54: $3 \times 10^{-6} = 3\text{ppm}$, Hz=ppm $\times f \times 10^6$

Article 2 Paragraph 1 of Item 21-3: 0.25ppm, Hz=ppm $\times f \times 10^6$

4.2 MEASUREMENT METHOD

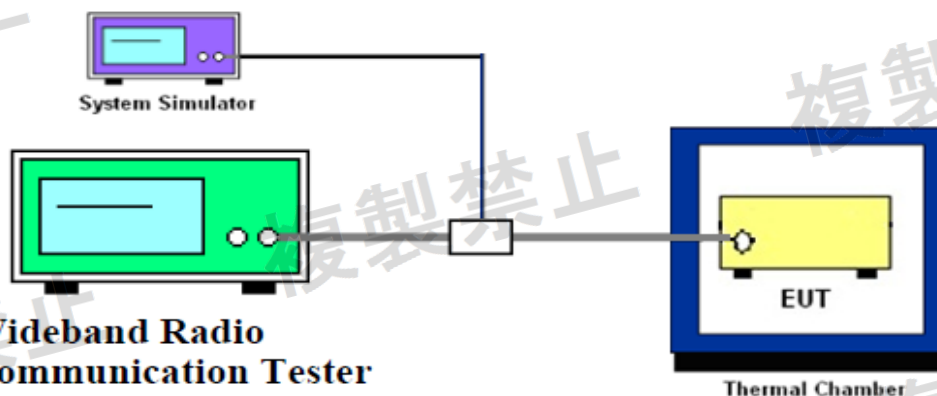
According to ts-136 521-1: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment(UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing. The initial test configurations consist of test frequencies, and channel bandwidths based on E-UTRA bands specified in table:

Test Parameters For Channel Bandwidths						
CH BW	DownLink Configuration			UpLink Configuration		
	Mode	RB Allocation		Mode	RB Allocation	
		FDD	TDD		FDD	TDD
5M	QPSK	25	25	QPSK	25	25
5M	QPSK	25	N/A	QPSK	20	N/A
5M	QPSK	25	N/A	QPSK	15	N/A
10M	QPSK	50	50	QPSK	50	50
10M	QPSK	50	N/A	QPSK	25	N/A
10M	QPSK	50	N/A	QPSK	20	N/A
10M	QPSK	50	N/A	QPSK	15	N/A
15M	QPSK	75	75	QPSK	75	75
15M	QPSK	75	N/A	QPSK	50	N/A
15M	QPSK	75	N/A	QPSK	25	N/A
15M	QPSK	75	N/A	QPSK	20	N/A
20M	QPSK	100	100	QPSK	100	100
20M	QPSK	100	N/A	QPSK	75	N/A
20M	QPSK	100	N/A	QPSK	50	N/A
20M	QPSK	100	N/A	QPSK	25	N/A
20M	QPSK	100	N/A	QPSK	20	N/A

Note 1: Test channel bandwidths are checked separately for each E-UTRA band, which applicable channel bandwidths are specified in Table 5.4.2.1-1.

Note 2: Depending on E-UTRA band, only the appropriate Uplink RB allocation value according to table 7.3.3-2 is tested per test channel bandwidth.

4.3 TEST SETUP





4.4 TEST PROCEDURES

1. Vibration test:

Set the vibration test system as the table below:

Frequency	ASD(Acceleration Spectral Density) random vibration
From 5Hz to 20Hz	0.96m2/s3
Exceeding 20Hz to 500Hz	-3dB/Octave

Start the vibration test system, Test the frequency tolerance, Record the test result.

2. Temperature test:

Place the device to be tested in the temperature and humidity tester in the non-operation state and set the temperature of the temperature and humidity tester to a low temperature while in this condition. the low temperature is 0℃, -10℃ and -20℃, use the minimum value within the range of the specification of the device to be tested. the high temperature is 40℃, 50℃ and 60℃, use the highest value within the range of the specification of the device to be tested.

Leave it in this condition for 1 hour.

Apply the prescribed power supply voltage to operate to device to be tested in the temperature and humidity tester. Test the frequency tolerance, Record the test result.

3. Humidity Test:

Place the device to be tested in the temperature and humidity tester in the non-operating state. While this

condition remains, set the temperature to 35℃ and the relative humidity to 95% or the maximum or the maximum humidity in the specification of the device to be tested in the temperature and humidity tester. Leave it in this condition for 4 hours.

After this time, the setting of the temperature and humidity tester is changed back to the normal temperature and normal humidity and, after confirming that there is no condensation, operate the device to be tested by applying the prescribed power supply voltage.

Test the frequency tolerance, Record the test result.

4. Voltage Fluctuation Test:

Set the power supply to test voltage, Test the frequency tolerance, Record the test result. Note: NH:

Normal Humidity: 65%

HH: High Humidity: 95%

NT: Normal Temperature: 26℃

LT: Low Temperature: -20℃

HT: High Temperature: 60℃

LV: Low Voltage: 3.483V

NV: Normal Voltage: 3.87V

HV: High Voltage: 4.257V

5. Environmental Conditions:

Temperature:	26 °C
Relative Humidity:	65 %
ATM Pressure:	100 kPa

4.5 TEST RESULTS

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



5. OCCUPIED BANDWIDTH

5.1 LIMIT

Article 2 Paragraph 1 of Item 11-19

FD-LTE, Land mobile Station:

≤5 MHz for 5MHz, ≤10 MHz for 10MHz, ≤15 MHz for 15MHz, ≤20 MHz for 20MHz.

Transmission System	Channel Interval	Technical Requirement
Transmission by the "one" carrier	3MHz (700MHz band, 800MHz band, 900MHz band, 1.7GHz band only)	3MHz
	5MHz	5MHz
	10MHz	10MHz
	15MHz	15MHz
	20MHz	20MHz

Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method:

1897.4, 1899.2, 1901MHz: 1.4MHz; 1899.1MHz: 5MHz

Article 2 Paragraph 1 of Item 54

TD-LTE (AXGP) Land Mobile Station:

Transmission System	Technical Requirement
Transmission by the "one" carrier or Simultaneous transmission by the non-continuous "multiple" carrier(*)	2.5MHz
	5MHz
	10MHz
	20MHz
Simultaneous transmission by the continuous "two" carrier	5MHz & 5MHz
	5MHz & 10MHz
	10MHz & 10MHz
	5MHz & 20MHz
	10MHz & 20MHz
	20MHz & 20MHz



Article 2 Paragraph 1 of Item 11-21
TD-LTE, Land mobile Station:

Transmission System		2GHz Band (2,010 ~ 2,025 MHz)	3.5GHz Band (3,400 ~ 3,600 MHz)
Transmission by the "one" carrier or Simultaneous transmission by the non-continuous "multiple" carrier(*)	5MHz System	5MHz	5MHz
	10MHz System	10MHz	10MHz
	15MHz System	15MHz	15MHz
	20MHz System	—	20MHz
Simultaneous transmission by the continuous "two" carrier	5MHz + 5MHz System	—	9.8MHz
	5MHz + 10MHz System	—	14.95MHz
	5MHz + 15MHz System	—	19.8MHz
	5MHz + 20MHz System	—	24.95MHz
	10MHz + 10MHz System	—	19.9MHz
	10MHz + 15MHz System	—	24.75MHz
	10MHz + 20MHz System	—	29.9MHz
	15MHz + 15MHz System	—	30MHz
	15MHz + 20MHz System	—	34.85MHz
	20MHz + 20MHz System	—	39.8MHz

5.2 MEASUREMENT METHOD

According To Ts-136 521-1: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) Conformance Specification; Radio Transmission And Reception; Part 1: Conformance Testing. The Initial Test Configurations Consist Of Test Frequencies, And Channel Bandwidths Based On E-UTRA

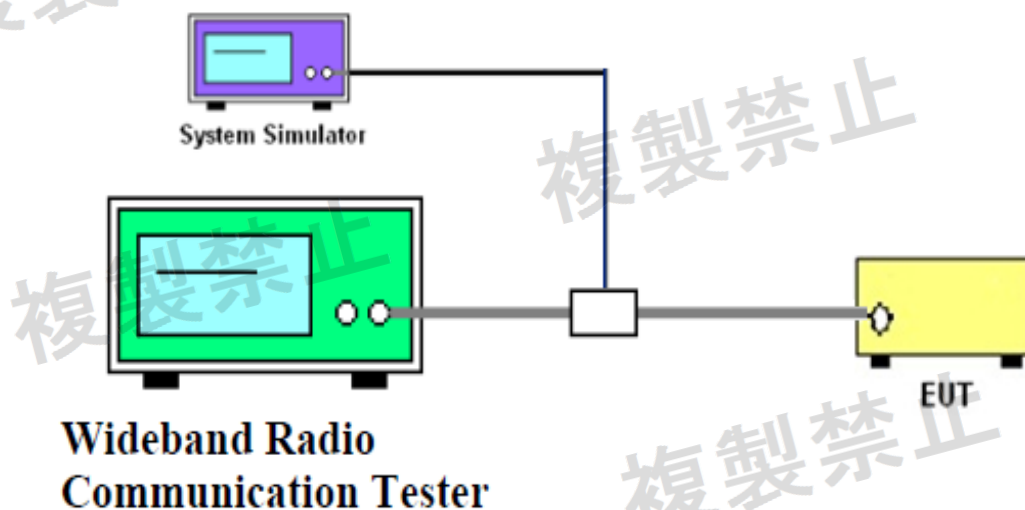
Test Parameters For Channel Bandwidths					
CH BW	DownLink Configuration N/A For Occupied Bandwidth	UpLink Configuration			
		Mode		RB Allocation	
		QPSK	16QAM	FDD	TDD
3M		QPSK	16QAM	15	15
5M		QPSK	16QAM	25	25
10M		QPSK	16QAM	50	50
15M		QPSK	16QAM	75	75
20M		QPSK	16QAM	100	100

Bands Specified In Table:

Note 1: Test Channel Bandwidths are checked separately for each E-UTRA band, the applicable channel bandwidths are specified in Table 5.4.2.1-1.



5.3 TEST SETUP



5.4 TEST PROCEDURES

1. Setting of SA is following as: RB: 100 kHz / VB: 100 kHz / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Sample / Trace mode: Max hold
2. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.

5.5 MEASUREMENT RESULT

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



6. UNWANTED EMISSION STRENGTH IN THE OUT-OF-BAND DOMAIN

6.1 LIMIT

Article 2 Paragraph 1 of Item 11-19

FDD-LTE, Land mobile Station:

Transmission System	Channel Interval	Technical Requirement
Transmission by the "one" carrier or Simultaneous transmission by the non-continuous "multiple" carrier(*)	3MHz	Cf ± (1.5 - 2.5) MHz : -11.5dBm /30kHz
		Cf ± (2.5 - 6.5) MHz : -8.5dBm/MHz
		Cf ± (6.5 - 7.5) MHz : -23.5dBm/MHz
	5MHz	Cf ± (2.5 - 3.5) MHz : -13.5dBm /30kHz
		Cf ± (3.5 - 7.5) MHz : -8.5dBm/MHz
		Cf ± (7.5 - 8.5) MHz : -11.5dBm/MHz
		Cf ± (8.5 - 12.5) MHz : -23.5dBm/MHz
	10MHz	Cf ± (5 - 6) MHz : -16.5dBm /30kHz
		Cf ± (6 - 10) MHz : -8.5dBm/MHz
		Cf ± (10 - 15) MHz : -11.5dBm/MHz
		Cf ± (15 - 20) MHz : -23.5dBm/MHz
	15MHz	Cf ± (7.5 - 8.5) MHz : -18.5dBm /30kHz
		Cf ± (8.5 - 12.5) MHz : -8.5dBm/MHz
		Cf ± (12.5 - 22.5) MHz : -11.5dBm/MHz
		Cf ± (22.5 - 27.5) MHz : -23.5dBm/MHz
	20MHz	Cf ± (10 - 11) MHz : -19.5dBm /30kHz
		Cf ± (11 - 15) MHz : -8.5dBm/MHz
		Cf ± (15 - 30) MHz : -11.5dBm/MHz
		Cf ± (30 - 35) MHz : -23.5dBm/MHz

Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method:

Frequency range	1.4MHz system	5MHz system
Cf ± 0.7 (<) ~ (≤) 1.7MHz	-13.7dBm / 30kHz	-
Cf ± 1.7 (<) ~ (≤) 3.2MHz	-10dBm / MHz	-
Cf ± 3.2 (<) ~ (≤) 3.5MHz	-25dBm / MHz	-
Cf ± 2.5 (<) ~ (≤) 3.5MHz	-	-15dBm / 30kHz
Cf ± 3.5 (<) ~ (≤) 6.1MHz	-	-10dBm / MHz
Cf ± 6.1 (<) ~ (≤) 7.3MHz	-	Master : -29dBm / MHz Slave : -13dBm / MHz
Cf ± 7.3 (<) ~ (≤) 12.5MHz	-	Master : -36dBm / MHz Slave : -25dBm / MHz
1895.04 (<) ~ (≤) 1896.192MHz	-12dBm / 1.152MHz	
1901.952 (<) ~ (≤) 1903.104MHz	-12dBm / 1.152MHz	



Article 2 Paragraph 1 of Item 54
TD-LTE (AXGP) Land Mobile Station:

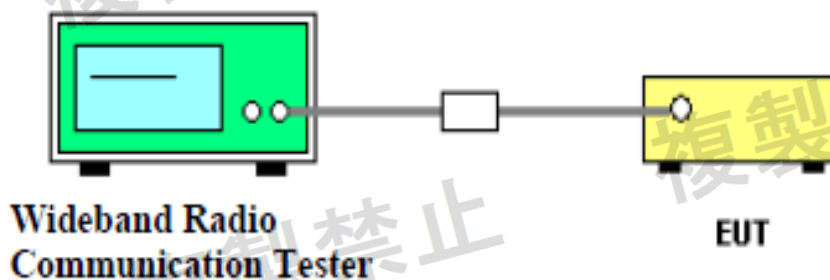
Transmission System		Technical Requirement
Transmission by the "one" carrier or Simultaneous transmission by the non-continuous "multiple" carrier(*)	2.5MHz	*Cf ± (3.75 - 6.25) MHz : -10dBm/MHz
	5MHz	*Cf ± (7.5 - 12.5) MHz : -10dBm/MHz
	10MHz	*Cf ± (15 - 20) MHz : -25dBm/MHz
		*Cf ± (20 - 25) MHz : -30dBm/MHz
	20MHz	*Cf ± (30 - 35) MHz : -25dBm/MHz
		*Cf ± (35 - 50) MHz : -30dBm/MHz

Article 2 Paragraph 1 of Item 11-21
TD-LTE, Land mobile Station:

*2GHz Band (2,010 ~ 2,025 MHz)

5MHz System	10MHz System	15MHz System
Detuning Frequency Under 1MHz : -13.5dBm /30kHz *Cf ± (2.5 - 3.5) MHz :	Detuning Frequency Under 1MHz : -16.5dBm /30kHz *Cf ± (5 - 6) MHz :	Detuning Frequency Under 1MHz : -18.5dBm /30kHz *Cf ± (7.5 - 8.5) MHz :
Detuning Frequency 1 - 5 MHz : -8.5dBm/MHz *Cf ± (3.5 - 7.5) MHz :	Detuning Frequency 1 - 5 MHz : -8.5dBm/MHz *Cf ± (6 - 10) MHz :	Detuning Frequency 1 - 5 MHz : -8.5dBm/MHz *Cf ± (8.5 - 12.5) MHz :
Detuning Frequency 5 - 6 MHz : -11.5dBm/MHz *Cf ± (7.5 - 8.5) MHz :	Detuning Frequency 5 - 10 MHz : -11.5dBm/MHz *Cf ± (10 - 15) MHz :	Detuning Frequency 5 - 15 MHz : -11.5dBm/MHz *Cf ± (12.5 - 22.5) MHz :
Detuning Frequency 6 - 10 MHz : -23.5dBm/MHz *Cf ± (8.5 - 12.5) MHz :	Detuning Frequency 10 - 15 MHz : -23.5dBm/MHz *Cf ± (15 - 20) MHz :	Detuning Frequency 15 - 20 MHz : -23.5dBm/MHz *Cf ± (22.5 - 27.5) MHz :

6.2 TEST SETUP



6.3 TEST PROCEDURES

1. Set and send continuously Up power control commands to the UE until the UE output power shall be at the maximum level.
2. Measure the power of the transmitted signal with a measurement filter of bandwidths according to table. The characteristic of the filter shall be approximately Gaussian (typical spectrum analyzer filter). The centre frequency of the filter shall be stepped in contiguous steps according to table. The measured power shall be recorded for each step.
3. Measure the RRC filtered mean power centred on the assigned channel frequency.
4. Calculate the ratio of the power 2) with respect to 3) in dBc.

6.5 MEASUREMENT RESULT

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



7. ADJACENT CHANNEL LEAKGE POWER

7.1 LIMIT

Article 2 Paragraph 1 of Item 11-19

FDD-LTE, Land mobile Station:

Transmission System	Channel Interval	Technical Requirement
Transmission by the "one" carrier or Simultaneous transmission by the non-continuous "multiple" carrier	3MHz	Cf ± (1.65 - 4.35) MHz : -50dBm or -29.2dBc / 2.7MHz
		Cf ± (2.08 - 5.92) MHz : -50dBm or -32.2dBc / 3.84MHz
	5MHz	Cf ± (3.08 - 6.92) MHz : -50dBm or -32.2dBc / 3.84MHz (*1)
		Cf ± (2.75 - 7.25) MHz : -50dBm or -29.2dBc / 4.5MHz (*2)
		Cf ± (8.08 - 11.92) MHz : -50dBm or -35.2dBc / 3.84MHz (*3)
	10MHz	Cf ± (5.58 - 9.42) MHz : -50dBm or -32.2dBc / 3.84MHz (*1)
		Cf ± (5.5 - 14.5) MHz : -50dBm or -29.2dBc / 9MHz (*2)
		Cf ± (10.58 - 14.42) MHz : -50dBm or -35.2dBc / 3.84MHz (*3)
	15MHz	Cf ± (8.08 - 11.92) MHz : -50dBm or -32.2dBc / 3.84MHz (*1)
		Cf ± (13.08 - 16.92) MHz : -50dBm or -35.2dBc / 3.84MHz (*3)
		Cf ± (8.25 - 21.75) MHz : -50dBm or -29.2dBc / 13.5MHz (*2)
	20MHz	Cf ± (10.58 - 14.42) MHz : -50dBm or -32.2dBc / 3.84MHz (*1)
		Cf ± (15.58 - 19.42) MHz : -50dBm or -35.2dBc / 3.84MHz (*3)
		Cf ± (11 - 29) MHz : -50dBm or -29.2dBc / 18MHz (*2)

Article 2 Paragraph 1 of Item 54

TD-LTE (AXGP) Land Mobile Station:

Transmission System	Technical Requirement
Transmission by the "one" carrier or Simultaneous transmission by the non-continuous "multiple" carrier(*)	2.5MHz : *Cf ± (1.25 - 3.75) MHz : 2dBm/2.5MHz
	5MHz : *Cf ± (2.5 - 7.5) MHz : 2dBm/5MHz
	10MHz : *Cf ± (5 - 15) MHz : 2dBm/10MHz
	20MHz : *Cf ± (10 - 30) MHz : 3dBm/20MHz

Article 2 Paragraph 1 of Item 11-21

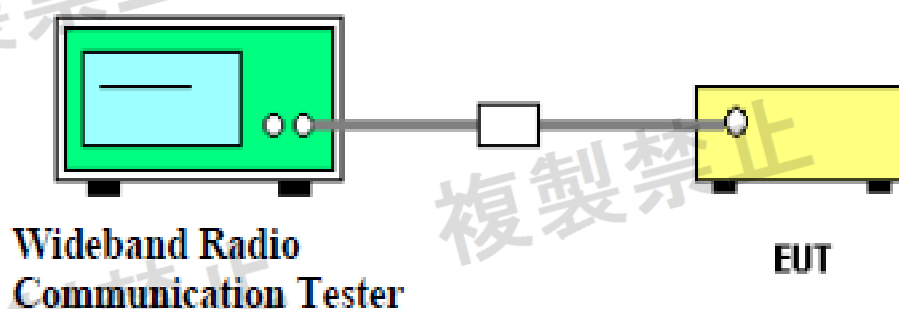
TD-LTE, Land mobile Station:

*2GHz Band (2,010 ~ 2,025 MHz)

5MHz System	10MHz System	15MHz System
Cf ± 5 MHz : -50dBm/4.5MHz or *Cf ± (2.75 - 7.25) MHz : -29.2dBc/4.5MHz	Cf ± 10 MHz : -50dBm/9MHz or *Cf ± (5.5 - 14.5) MHz : -29.2dBc/9MHz	Cf ± 15 MHz : -50dBm/13.5MHz or *Cf ± (8.25 - 21.75) MHz : -29.2dBc/13.5MHz



7.2 TEST SETUP



7.3 MEASUREMENT METHOD

According to ts-136 521-1: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing. The initial test configurations consist of test frequencies, and channel bandwidths based on E-UTRA bands.

specified in table: Test Parameters For Channel Bandwidths					
DownLink Configuration		UpLink Configuration			
CH BW	N/A for ACLR testing	Mode		RB Allocation	
				FDD	TDD
3M		QPSK	16QAM	15	15
3M		QPSK	16QAM	4	4
5M		QPSK	16QAM	25	25
5M		QPSK	16QAM	8	8
10M		QPSK	16QAM (Not 3)	50	50
10M		QPSK	16QAM	12	12
15M		QPSK	16QAM (Not 3)	75	75
15M		QPSK	16QAM	16	16
20M		QPSK	16QAM (Not 3)	100	100
20M		QPSK	16QAM	18	18
Note 1: Test Channel Bandwidths are checked separately for each E-UTRA band, which applicable channel bandwidths are specified in Table 5.4.2.1-1.					
Note 2: The RB _{start} of partial RB allocation shall be RB#0 and RB# (max + 1 - RB allocation) of the channel bandwidth.					
Note 3: Applies only for UE-Categories 2-5					

7.4 TEST PROCEDURES

1. The SS sends continuously Up power control commands to the UE until the UE transmitter power reaches maximum level.
2. Measure the RRC filtered mean power.
3. Measure the RRC filtered mean power of the first adjacent channels and the second adjacent channels.
4. Calculate the ratio of the power between the values measured in 2) and 3) above.

7.5 TEST RESULT

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



8. UNWANTED EMISSION STRENGTH IN THE SPURIOUS DOMAIN

8.1 LIMIT

Article 2 Paragraph 1 of Item 11-19

FDD-LTE, Land mobile Station

The Unwanted Emission In The Spurious Area Should Below:

Frequency range	700MHz Band (715 ~ 719 MHz)	700MHz Band (719 ~ 749 MHz)	800MHz Band (815 ~ 845 MHz)	900MHz Band (900 ~ 915 MHz)	1.5GHz Band (1,427.9 ~ 1,462.9 MHz)	1.7GHz Band (1,710.0 ~ 1,750.0 MHz)	1.7GHz Band (1,750.0 ~ 1,785.0 MHz)	2GHz Band (1,920.0 ~ 1,980.0 MHz)
9 kHz ~ 150 kHz	-36dBm/1kHz							
150 kHz ~ 30 MHz	-36dBm/10kHz							
30 ~ 1,000 MHz except as (*)	-36dBm/100kHz							
470 ~ 710 MHz (*)	-36dBm/100kHz	-26.2dBm/5MHz (3MHz ~ 36dBm/100kHz)	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz
770 ~ 773 MHz (*)	-32dBm/MHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz
773 ~ 803 MHz (*)	-50dBm/MHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz
880 ~ 890 MHz (*)	-50dBm/MHz	-40dBm/MHz	-40dBm/MHz	-40dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz
945 ~ 960 MHz (*)	-50dBm/MHz	-36dBm/100kHz	-50dBm/MHz	-36dBm/100kHz	-50dBm/MHz	-36dBm/100kHz	-36dBm/100kHz	-36dBm/100kHz
1,000 ~ 12,750 MHz except as (*)	-30dBm/MHz							
1,475.9 ~ 1,496.9 MHz (*)	-50dBm/MHz	-30dBm/MHz (*)	-50dBm/MHz	-50dBm/MHz	-35dBm/MHz (5MHz ~ 30dBm/MHz)	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz
1,496.9 ~ 1,510.9 MHz (*)	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-35dBm/MHz (5MHz ~ 30dBm/MHz)	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz
1,805.0 ~ 1,845.0 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz
1,845.0 ~ 1,880.0 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz
1,906.9 ~ 1,910.0 MHz (*)	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-25dBm/MHz (5MHz ~ 30dBm/MHz)
1,910.0 ~ 1,915.7 MHz (*)	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-25dBm/MHz
2,010.0 ~ 2,025.0 MHz (*)	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz
2,110.0 ~ 2,144.4 MHz (*)	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz
2,144.4 ~ 2,170.0 MHz (*)	-30dBm/MHz (*)	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz	-50dBm/MHz
2,330.0 ~ 2,370.0 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz
3,400.0 ~ 3,419.3 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz
3,419.3 ~ 3,500.7 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz
3,500.7 ~ 3,574.7 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz
3,574.7 ~ 3,590.3 MHz (*)	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz
3,590.3 ~ 3,600.0 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz
3,600.0 ~ 4,100.0 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz
4,600.0 ~ 4,900.0 MHz (*)	-50dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz	-30dBm/MHz

5MHz System: applies to the frequency range of over 12.5 MHz from center frequency.

10MHz System: applies to the frequency range of over 20.0 MHz from center frequency.

15MHz System: applies to the frequency range of over 27.5 MHz from center frequency.

20MHz System: applies to the frequency range of over 35.0 MHz from center frequency.

Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method:

Frequency range	1.4MHz system	5MHz system
30 (≤) ~ (<) 1,000 MHz	-36dBm/MHz	-36dBm/MHz
1,000 (≤) ~ (<) 12,750 MHz *	-36dBm/MHz	-36dBm/MHz



Article 2 Paragraph 1 of Item 54
TD-LTE (AXGP) Land Mobile Station:

Measurement Frequency range	Technical Requirement
9 kHz – 150 kHz	-13dBm/kHz
150 kHz – 30 MHz	-13dBm/10kHz
30 – 1,000 MHz	-13dBm/100kHz
1,000 MHz - 2,505 MHz	-13dBm/MHz
2,505 MHz - 2,530 MHz	-30dBm/MHz
2,530 MHz - 2,535 MHz	-25dBm/MHz
2,535 MHz - 2,655 MHz	-30dBm/MHz
2,655 MHz - 13.5GHz	-13dBm/MHz

Article 2 Paragraph 1 of Item 11-21
TD-LTE, Land mobile Station:

Frequency range	2GHz Band (2,010 ~ 2,025 MHz)	3.5GHz Band (3,400 ~ 3,600 MHz)
9 kHz – 150 kHz	-36dBm/1kHz	
150 kHz – 30 MHz	-36dBm/10kHz	
30 – 1,000 MHz (except as below)	-36dBm/100kHz	
*773 – 803 MHz	-	-50dBm/MHz
*860 – 890 MHz	-	-50dBm/MHz
*945 – 960 MHz	-	-50dBm/MHz
1,000 – 12,750 MHz (except as below)	-30dBm/MHz	
*1,845.0 – 1,880.0MHz	-	-50dBm/MHz
*1,884.5 – 1,915.7 MHz	-41dBm/300kHz	-
*2,010.0 – 2,025.0 MHz	-	-50dBm/MHz
*2,110.0 – 2,170.0 MHz	-	-50dBm/MHz
12,750 – 18,000 MHz	-	-30dBm/MHz

5MHz System: applies to the frequency range of over 12.5 MHz from center frequency.

10MHz System: applies to the frequency range of over 20.0 MHz from center frequency.

15MHz System: applies to the frequency range of over 27.5 MHz from center frequency.

20MHz System: applies to the frequency range of over 35.0 MHz from center frequency.

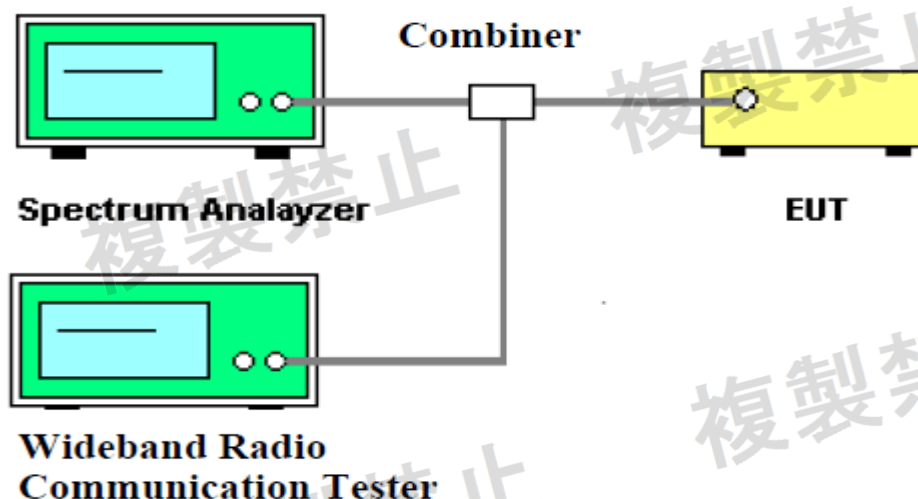


8.2 MEASUREMENT METHOD

According to ts-136 521-1: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing. The initial test configurations consist of test frequencies, and channel bandwidths based on E-UTRA bands

Test Parameters For Channel Bandwidths			
CH BW	DownLink Configuration	UpLink Configuration	
	N/A For Occupied Bandwidth	Mode	RB Allocation
			FDD TDD
3M	N/A For Occupied Bandwidth	QPSK	6 6
3M		QPSK	1 1
5M		QPSK	25 25
5M		QPSK	1 1
10M		QPSK	50 50
10M		QPSK	1 1
15M		QPSK	75 75
15M		QPSK	1 1
20M		QPSK	100 100
20M		QPSK	1 1

8.3 TEST SETUP



8.4 TEST PROCEDURES

1. Set and send continuously up power control commands to the UE until the UE output power shall be maximum level.
2. Sweep the spectrum analyser (or equivalent equipment) over a frequency range and measure the average power of spurious emission.

Note: Use the filter to reduce the fundamental power in all test, so the fundamental power do not display on the test plots.

8.5 TEST RESULTS

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



9. LEAKAGE POWER AT NO-CARRIER TRANSMISSION

9.1 LIMIT

Article 2 Paragraph 1 of Item 11-19

FDD-LTE, Land mobile Station:

Leakage Power at No-Carrier Transmission	Channel interval 5MHz : -48.5dBm/4.5MHz Channel interval 10MHz : -48.5dBm/9MHz Channel interval 15MHz : -48.5dBm/13.5MHz Channel interval 20MHz : -48.5dBm/18MHz	✓	OT : Article 49-6-9
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Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method: 80nW=-40.97dBm

Article 2 Paragraph 1 of Item 54

TD-LTE (AXGP) Land Mobile Station: -30 dBm

Article 2 Paragraph 1 of Item 11-21

TD-LTE, Land mobile Station:

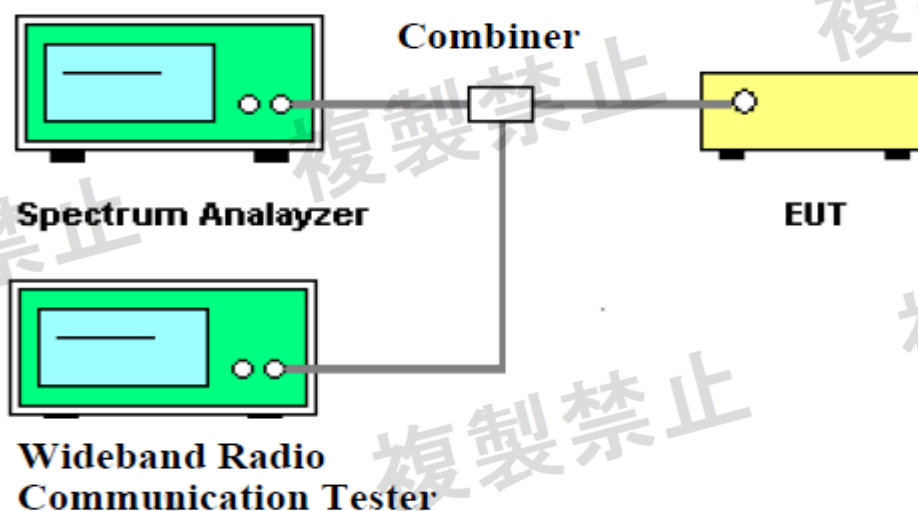
	2GHz Band (2,010 ~ 2,025 MHz)	3.5GHz Band (3,400 ~ 3,600 MHz)
5MHz System	-48.5dBm/4.5MHz	-48.2dBm/4.5MHz
10MHz System	-48.5dBm/9MHz	-48.2dBm/9MHz
15MHz System	-48.5dBm/13.5MHz	-48.2dBm/13.5MHz
20MHz System	—	-48.2dBm/18MHz

9.2 TEST PROCEDURES

It shall be set in the transmission stopping condition by means of key operation, controller or the exterior test equipment.

Sweep the transmission band and search maximum value of leak power amplitude. The reading value add 4.31dB for conversion the measuring bandwidth 1MHz to 2.7MHz, add 6.53dB for conversion the measuring bandwidth 1MHz to 4.5MHz, add 9.54dB for conversion the measuring bandwidth 1MHz to 9MHz, add 11.3dB for conversion the measuring bandwidth 1MHz to 13.5MHz, add 12.55dB for conversion the measuring bandwidth 1MHz to 18MHz.

9.3 TEST SETUP



9.4 TEST RESULTS

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



10. SECONDARY RADIATED EMISSION STRENGTH

10.1 LIMIT

Article 2 Paragraph 1 of Item 11-19
FDD-LTE, Land mobile Station

Frequency Band	Measurement Bandwidth	Limit	Quotation
30MHz-1000MHz	100kHz	-57dBm /100kHz	OT : Article 24 4-3 OT : Article 24 5-3
1000MHz-12750MHz	1000kHz	-47dBm /1000kHz	OT : Article 24 6-3 OT : Article 24 7-3

Note: the limit was applied to antenna gain less than 3dBi.

Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method:

30 (≤) ~ (<) 1000MHz: 2nW / 100kHz

1 (≤) ~ (<) 12.75GHz: 20nW / MHz

Note: the limit was applied to antenna gain less than 4dBi.

Article 2 Paragraph 1 of Item 54

TD-LTE (AXGP) Land Mobile Station:

9 kHz - 150 KHz: -54dBm/1kHz

150 kHz - 30 MHz: -54dBm/10kHz

30 MHz - 1,000 MHz: -54dBm/100kHz

1 GHz - 13.5 GHz: -47dBm/1MHz

Note: the limit was applied to antenna gain less than 4dBi.

Article 2 Paragraph 1 of Item 11-21

TD-LTE, Land mobile Station:

2010-2025 MHz Band:

30 MHz - 1,000 MHz: -54dBm/100kHz

1 GHz - 12.75 GHz: -47dBm/1MHz

Note: the limit was applied to antenna gain is 0dBi or less.

3400-3600 MHz Band:

30 MHz - 1,000 MHz: -57dBm/100kHz

1 GHz - 18 GHz: -47dBm/1MHz

Note: the limit was applied to antenna gain is 3dBi or less.

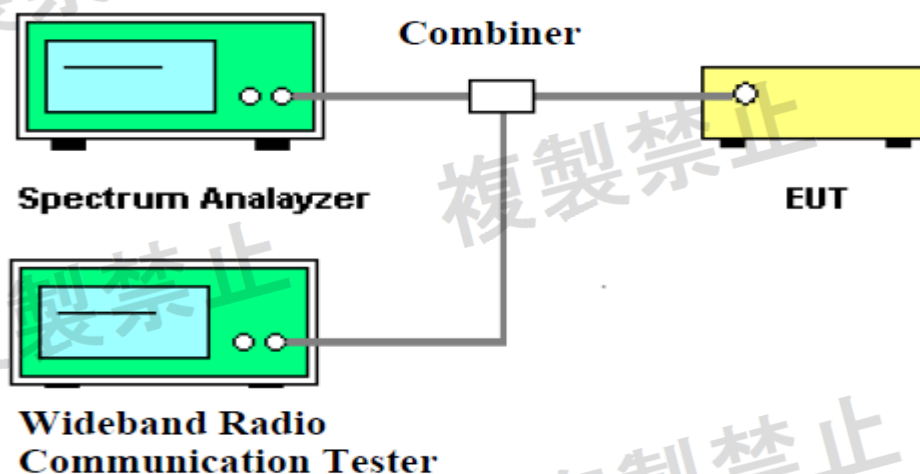
10.2 MEASUREMENT METHOD

According to ts-136 521-1: LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing. The initial test configurations consist of test frequencies, and channel bandwidths based on E-UTRA bands specified in table:

Test Parameters For Channel Bandwidths				
CH BW	DownLink Configuration N/A For Occupied Bandwidth	UpLink Configuration		
		Mode	RB Allocation	
			FDD	TDD
3M		QPSK	0	0
5M		QPSK	0	0
10M		QPSK	0	0
15M		QPSK	0	0
20M		QPSK	0	0



10.3 TEST SETUP



10.4 TEST RESULT

Note: The test data please reference to attachment "LGT25L205RF14 Appendix LTE".



11. SYSTEM OPERATION TEST

11.1 REQUIREMENT

The transmitter of each land mobile station communicating with a base station shall be identified automatically by a base station.

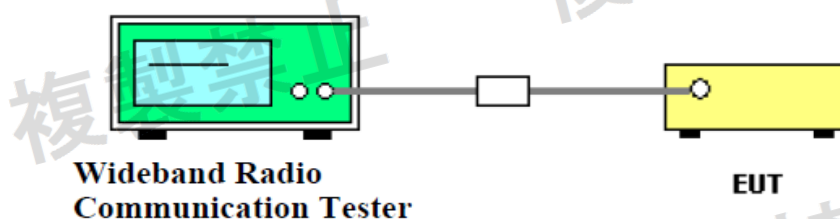
The radio equipment shall be the one in which the call channel of the base station is automatically switched to the call channel of another base station.

The area that is related to the provision of service of the base station prescribed in 1 and where field intensity necessary for providing the said service is available shall be capable of being segmentalized to suit the traffic of the said area.

The radio equipment shall have the function to separate the multi-path propagation received in temporal dispersion and improve the receive characteristics by synthesizing multi-path components.

The transmitter shall have an automatic control function to minimize the antenna received in temporal dispersion and improve the receive characteristics by base station or base on control information from a base station for the transmitter of a land mobile station.

11.2 TEST SETUP



11.3 TEST PROCEDURES

1. The test equipment to be tested shall be written with its own mobile station assigned number in advance.
2. Connect the equipment to be tested with the external test equipment and confirm the following items.
 - 1). Calling or receiving operation (including channel switching during communication)
 - 2). Number of mobile read operation
 - 3). antenna power degradation behavior (An automatic control function to minimize the antenna power as low as necessary by means of measuring receiving power of radio wave from base station).

11.4 TEST RESULT

PASS

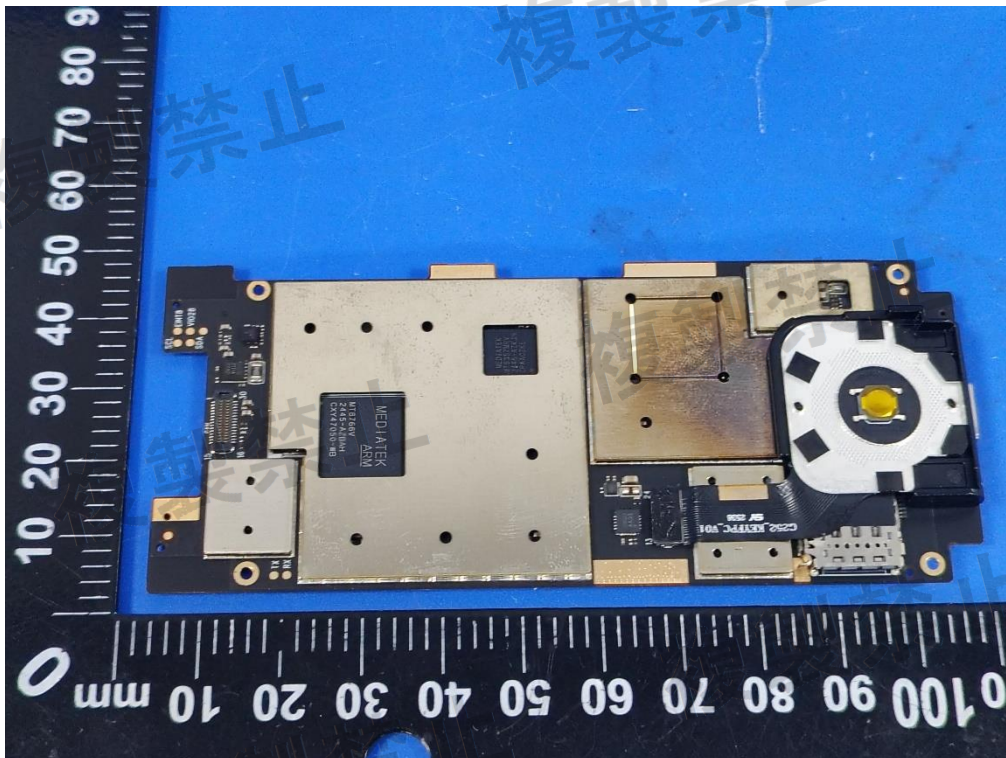


12. CONSTRUCTION PROTECTION CONFIRMATION

12.1 LIMIT

Radio equipment of the high frequency part and modulated part and antenna The system can not be easily open.

12.2 STRUCTURE DIAGRAM



12.3 STRUCTURE PROTECTION DESCRIBED

Our products apply for Japanese radio frequency (rf) certification. There is a shield that cannot be opened easily

12.4 TEST RESULT

PASS



13. CARRIER SENSING FUNCTION

13.1 TEST REQUIREMENT

Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method:

	1.4MHz system	5MHz system
When the "master unit" acts as a substitute for the carrier sense of the "slave unit"	In the transmit channel & corresponding receive channel, received power of radio waves emitted by radio stations other than the communication partner : -68dBm* (continuas two or more frames)	In the transmit channel & corresponding receive channel, received power of radio waves emitted by radio stations other than the communication partner : -64dBm* (continuas two or more frame
When the "slave unit" and the "master unit" each perform carrier sense	In the transmit channel & corresponding receive channel, received power of radio waves emitted by radio stations other than the communication partner : -62dBm* (continuas two or more frames)	In the transmit channel & corresponding receive channel, received power of radio waves emitted by radio stations other than the communication partner : -56dBm* (continuas two or more frame
Master Unit	Received power of the control channels (1898.45 or 1900.25MHz only) of the digital cordless telephone : -75dBm*	Received power of the control channels (1898.45 or 1900.25MHz only) of the digital cordless telephone : -82dBm*

13.2 TEST PROCEDURE

Setting of measuring instruments

(1) Set the standard signal generator as follows.

Signal frequency center frequency etc. of the transmission frequency band of the test equipment etc.

(Note 1)

Modulation unmodulated

Output level Test equipment -62 dBm at the receiving input terminal of the antenna (Note 2)

(2) Set spectrum analyzer as follows.

Center frequency 1, 899.35 MHz, Sweep frequency width 10 MHz, Resolution bandwidth 100 kHz,

About 3 times the video bandwidth resolution bandwidth, Y axis scale 10 dB / Div, Trigger condition free run,

Detection mode Positive peak

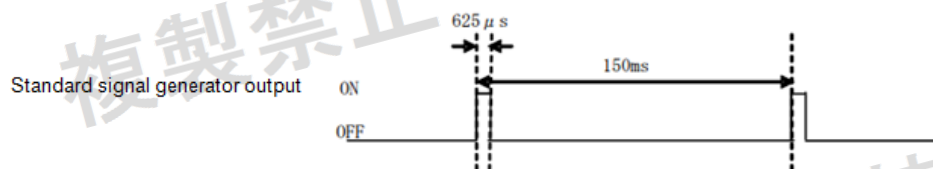
(3) Confirming the transmission impossible state To set the pulse signal generator, set the standard signal generator output to 15 ms off, And is a signal that is on for 4 s or longer. However, if it is the parent machine and the circumference of 1,898.15 MHz or 1,900.55 MHz

When trying to emit a radio wave with a wave number, the standard signal generator output is turned on for 625 μ s at a cycle of 150 ms

It is assumed to be a signal to be returned (see below plot).

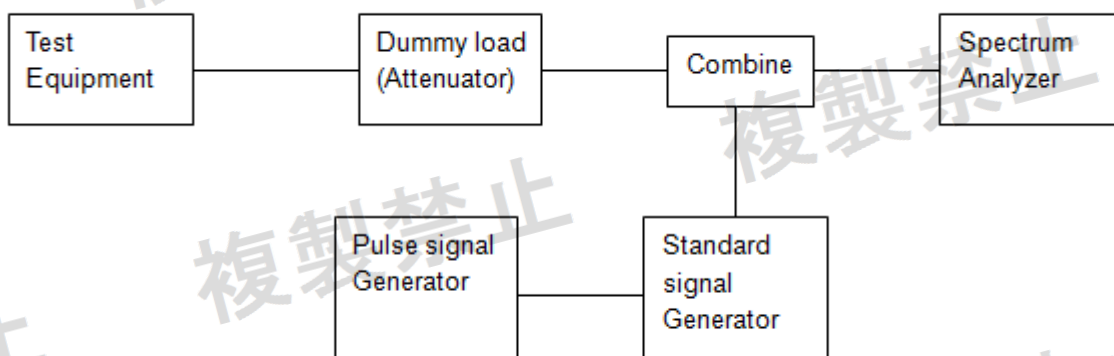


(1) Test device transmission impossible setting



(2) Test equipment transmission impossible setting
(when it is trying to fire a radio wave with a frequency of 1,898.15 MHz or 1,900.55 MHz as the parent machine)

13.3 TEST SETUP



13.4 TEST RESULT

PASS.



14. IDENTIFICATION CODE

14.1 TEST REQUIREMENT

Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method:

The radio waves shall not be emitted unless the following identification code is stored, and communication shall be established by transmitting and receiving the identification code.

Master unit: Decimal number starting from [44190](5 digits or more)

Slave unit: Decimal number starting from [44190](not exceed 15 digits)

14.2 TEST PROCEDURE

1. In the case that the EUT has the function of automatically transmitting the identification code:

a. Transmit the predetermined identification codes from EUT.

b. Check the transmitted identification codes with the demodulator.

2. In the case of receiving the identification code:

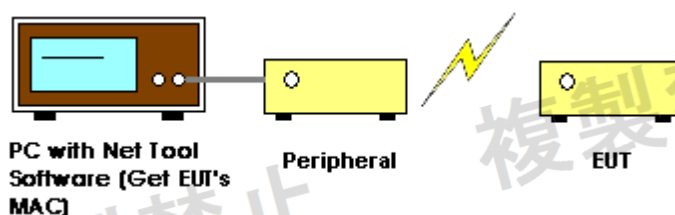
a. Transmit the predetermined identification codes from the counterpart.

b. Check if communication is normal.

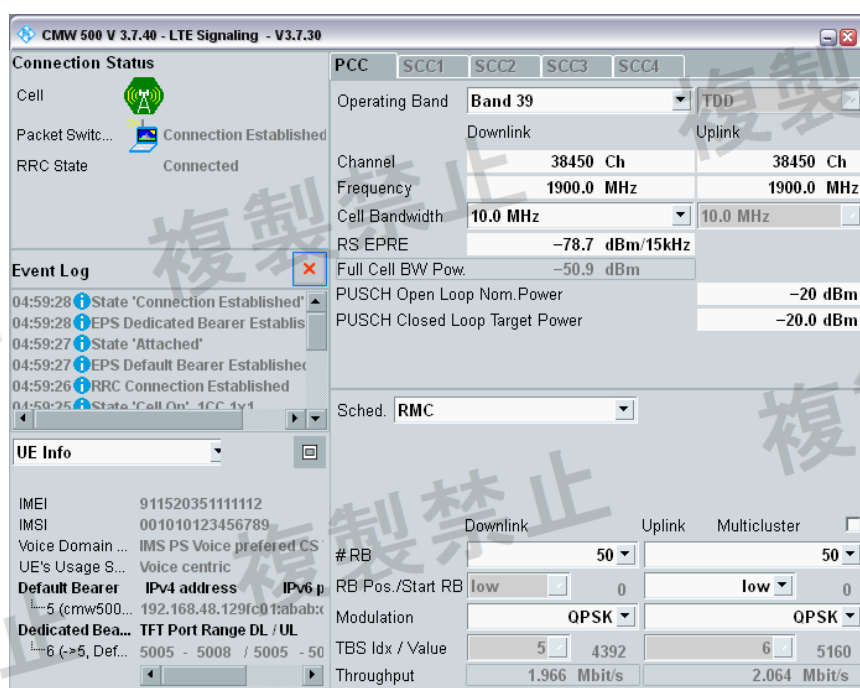
c. Transmit the signals other than predetermined ID codes from the counterpart.

d. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

14.3 TEST SETUP



14.4 TEST RESULT



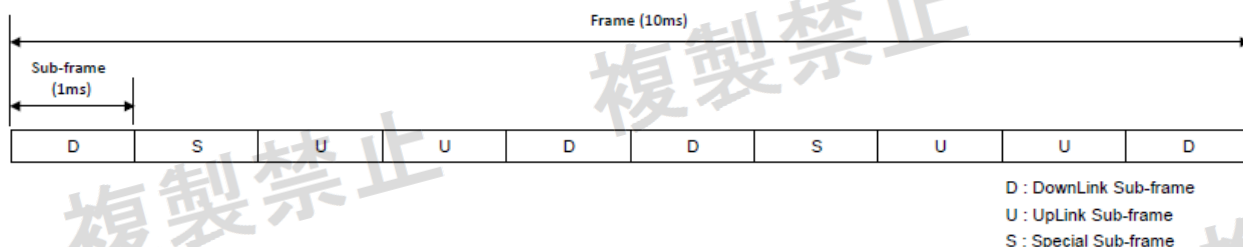


15. FRAME CONSTRUCTION

15.1 TEST REQUIREMENT

Article 2 Paragraph 1 of Item 21-3

Digital Cordless Telephone in TD-OFDMA method:



15.2 TEST PROCEDURE

Note: The test procedure please refer to Article 49-8-2-3.

15.3 TEST RESULT

PASS.



APPENDIX I - PHOTOS OF EUT SETUP PHOTO

Measurement Photos





APPENDIX II - PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Note: Please see the attached VEM4KA_EUT Photos.

※※※※END OF THE REPORT※※※※