



# FCC&ISED RF Test Report

**Product Name: Smart Phone** 

Model Number: ELE-L29/ELE-L09

Report No.: SYBH(Z-RF)20181114019001-2003

FCC ID: QISELE-LX9

Autheorized	APPROVED	PREPARED	
Autheonzed	(Lab Manager)	(Test Engineer)	
ВҮ	He Hao	Thou bing bo	
DATE	2018-12-27	2018-12-27	

# Reliability Laboratory of Huawei Technologies Co., Ltd.

(Global Compliance and Testing Center of Huawei Technologies Co., Ltd)

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

Tel: +86 755 28780808 Fax: +86 755 89652518



# **\* \* Notice \* \***

- 1. The Reliability Laboratory of Huawei Technologies Co., Ltd has passed the accreditation by The American Association for Laboratory Accreditation (A2LA). The accreditation number is 2174.01
- 2. The Laboratory of Sporton International (Shenzhen) Inc has passed the accreditation by National Voluntary Laboratory Accreditation Program (NVLAP). The NVLAP LAB CODE is 600156-0.
- 3. The Reliability Laboratory of Huawei Technologies Co., Ltd has been recognized by the US Federal Communications Commission (FCC) to perform compliance testing subject to the Commission's Certification rules. The Designation Number is CN1173, and the Test Firm Registration Number is 294140.
- 4. The Laboratory of Sporton International (Shenzhen) Inc has been recognized by the US Federal Communications Commission (FCC) to perform compliance testing subject to the Commission's Certification rules. The Designation Number is CN5019, and the Test Firm Registration Number is 577730.
- 5. The Reliability Laboratory of Huawei Technologies Co., Ltd has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 6369A-1.
- 6. The Reliability Laboratory of Huawei Technologies Co., Ltd is also named "Global Compliance and Testing Center of Huawei Technologies Co., Ltd", the both names have coexisted since 2009.
- 7. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- 8. The test report is invalid if there is any evidence of erasure and/or falsification.
- 9. The test report is only valid for the test samples.
- 10. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.



# **MODIFICATION RECORD**

Ν	o. Report No	Modification Description
1	SYBH(Z-RF)20181114019001	First release.

#### **DECLARATION**

Туре	Description				
Multiple	The present report applies to single model.				
Models	☐ The present report applies to several models. The practical measurements are				
Applications	performed with the model <u>ELE-L29</u> .				
	These models utilize the similar radio design, shielding, interface, physical layout and so on. The differences and modifications between these models are declared by the applicant and showed in General Description  All others between these models are identical.  The present report only presents the worst test case of all modes, see relevant test				
	results for detailed.				



#### 1 Table of contents

1	Table of contents				
2		al Information			
	2.1	Test standard/s			
	2.2	Test Environment			
	2.3	Test Laboratories	5		
	2.4	Applicant and Manufacturer			
	2.5	Application details	6		
3	Test S	ummary			
4		otion of the Equipment under Test (EUT)			
	4.1	General Description			
	4.2	EUT Identity	9		
	4.3	Technical Description	1		
5	Genera	al Test Conditions / Configurations	12		
	5.1	EUT Configurations	12		
	5.2	Test Setups	13		
	5.3	Test Conditions			
6	Main T	est Instruments	18		
7	Measu	rement Uncertainty	20		



#### 2 **General Information**

#### 2.1 Test standard/s

Applied Rules :	47 CFR FCC Part 2, Subpart J 47 CFR FCC Part 15, Subpart C	
	FCC KDB 558074 D01 DTS Meas Guidance v05	
Test Method :	ANSI C63.10-2013, American National Standard for Testing Unlicensed	
	Wireless Devices.	

#### 2.2 Test Environment

Temperature :	TN	N 15 to 30 °C during room temperature tests		uring room temperature tests
Ambient Relative Humidity:	20 to 85 %			
Atmospheric Pressure:	Not applicable			
	VL	3.6	V	
Power supply :	VN	3.82	V	DC by Battery
	VH	4.35	V	

NOTE 1: 1) VN= nominal voltage, VL= low extreme test voltage, VH= High extreme test voltage;

TN= normal temperature, TL= low extreme test temperature, TH= High extreme test temperature.

NOTE 2: The values used in the test report may be stringent than the declared.

#### 2.3 Test Laboratories

Test Location 1 :	RELIABILITY LABORATORY OF HUAWEI TECHNOLOGIES CO.,		
rest Location 1.	LTD.		
Address of Test Location 1 :	No.2 New City Avenue Songshan Lake Sci. &Tech. Industry Park,		
Address of Test Location 1.	Dongguan, Guangdong, P.R.C		
Sub-contracted Test Location	Sporton International (Shenzhen) Inc.		
1:	Sporton international (Sherizhen) inc.		
Address of Sub-contracted Test	No.3 Building, the third floor of south, Shahe River west, Fengzeyuan		
Location 1 :	warehouse, Nanshan District, Shenzhen, Guangdong, P.R.China		



# 2.4 Applicant and Manufacturer

Company Name : HUAWEI TECHNOLOGIES CO., LTD	
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Address:	Bantian, Longgang District, Shenzhen, 518129, P.R.C

# 2.5 Application details

Date of Receipt Sample:	2018-11-22
Start of test:	2018-11-22
End of test:	2018-12-25

# 3 Test Summary

Test Item	FCC Rule No.	Requirements	Test Result	Verdict	Testing location
DTS (6 dB) Bandwidth  15.247(a)(2)		≥ 500 kHz.	Appendix A	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1
Occupied Bandwidth		No limit.	Appendix B	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1
Duty Cycle KDB 558074 D01 (6.0)		No limit.	Appendix C	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1
Maximum Conducted Average Output Power		FCC: For directional gain: Conducted < 30 dBm – (G[dBi] – 6 [dB]); Otherwise: Conducted < 30 dBm,	Appendix D	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1
Spectral Density 15.247(e)		Conducted < 8 dBm/3 kHz.	Appendix E	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1
Band Edges < -20 dBr/100 Compliance 15.247(d) kHz if total peak power ≤ power		Appendix F	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1	



Test Item	FCC Rule No.	Requirements	Test Result	Verdict	Testing location
Unwanted Emissions into Non-Restricted Frequency Bands		limit.	Appendix G	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1
Unwanted Emissions into Restricted Frequency Bands (Radiated)	15.247(d) 15.209 (NOTE 1)	FCC Part 15.209 field strength limit;	Appendix H	Refer to NO. SYBH(Z-RF)2018111 5007001	Sub-contracte d Test Location 1
AC Power Line Conducted Emissions	15.207	FCC Part 15.207 conducted limit;	Appendix I	Refer to NO. SYBH(Z-RF)2018111 5007001	Test Location 1

Note1: According to KDB 558074 D01, antenna-port conducted measurements are acceptable as an alternative to radiated measurements for demonstrating compliance to the limits in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case emissions will also be required.

Note2: The transmitter has an integral PCB loop antenna that is enclosed within the housing of the EUT and meets the requirements of FCC 15.203



#### 4 Description of the Equipment under Test (EUT)

#### 4.1 General Description

ELE-L29/ELE-L09 is subscriber equipment in the GSM/WCDMA/LTE system. The GSM frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900. The UMTS frequency band is B1 and B2 and B4 and B5 and B6 and B8 and B19. The ELE-L29/ELE-L09 LTE frequency band is B1 and B2 and B4 and B5 and B6 and B7 and B8 and B9 and B12 and B17 and B18 and B19 and B20 and B26 and B28 and B32 and B34 and B38 and B39 and B41. The ELE-L29 LTE frequency band for intra-band carrier aggregation uplink operation band is CA\_1C and CA\_2C and CA\_3C and CA\_7C and CA\_38C and CA\_39C and CA\_41C. The Mobile Phone implements such functions as RF signal receiving/transmitting LTE/HSPA/UMTS and GSM/GPRS/EDGE protocol processing, voice, video MMS service, GPS, AGPS and WIFI etc. Externally it provides one micro SD card interface (it can also used as SIM card interface), earphone port (to provide voice service) and one SIM card interface.ELE-L29 is dual SIM smart phone. ELE-L09 is single SIM smart phone. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

The difference between model ELE-L04 and model ELE -L29 is show in the below table.

	Model	ELE-L04	ELE-L29
		FCC Band:	FCC Band:
		B2/B4/	B2/B4/
	LTE BAND	B5/B7/B12/B17/B26/B38/ B41	B5/B7/B12/B17/B26/B38/ B41
		(2535~2655MHz) /B66	(2535~2655MHz)
Licensed	UMTS BAND	FCC Band:	FCC Band:
Frequency	UNITS BAIND	B2/B4/B5	B2/B4/B5
	GSM	FCC Band:	FCC Band:
	GSIVI	B2/B5	B2/B5
	IC	the same	the same
	Antenna	the same	the same
	NFC	the same	the same
	Bluetooth	the same	the same
Unlicensed	2.4G Wi-Fi	the same	the same
Frequency	IC	the same	the same
	Antenna	the same	the same
	Ram / Rom	the same	the same
	Camera	the same	the same
Llordinoro	PCB	the same	the same
Hardware	USB Port	the same	the same
	SIM	one	two
	Hardware version	HL1ELLEM	HL1ELLEM
RF	RF circuit	The hardware channel of LTE	The hardware channel of LTE



		B2/4/7(include CA band) is	B2/4/7(include CA band) is
		different	different
Appearance	Dimension	the same	the same
	Color	different	different
	Battery	the same	the same
A 000000m/	External Charger	the same	the same
Accessory	USB label	the same	the same
	Earphone	the same	the same

Note1: Only Bluetooth BLE test data included in this report.

Note2: We do not test Bluetooth BLE of ELE-L29/ELE-L09, all test data can refer to No. SYBH(Z-RF)20181115007001 of ELE-L04(FCC ID:QISELE-L04).

#### 4.2 EUT Identity

NOTE: Unless otherwise noted in the report, the functional boards installed in the units shall be selected from the below list, but not means all the functional boards listed below shall be installed in one unit.

#### 4.2.1 Board

Board						
Description Software Version Hardware Version						
Main Board 5.0.1.73 (SP2C432E73R1P6) HL1ELLEM						

#### 4.2.2 Sub- Assembly

	Sub-Assembly							
Sub-Assembly Name	Model	Manufacturer	Description					
		Huawei	Input Voltage:100V-240V~50/60Hz, 0.75A					
Adapter	HW-050450B00	Technologies	Output Voltage: 5V === 2A OR4.5V === 5A					
		Co.,Ltd.	OR 5V === 4.5A					
		Huawei	Input Voltage:100V-240V~50/60Hz, 0.75A					
Adapter	HW-050450E00	Technologies	Output Voltage: 5V === 2A OR4.5V === 5A					
		Co.,Ltd.	OR 5V === 4.5A					
		Huawei	Input Voltage:100V-240V~50/60Hz, 0.75A					
Adapter	HW-050450U00	Technologies	Output Voltage: 5V === 2A OR4.5V === 5A					
		Co.,Ltd.	OR 5V === 4.5A					
		Huawei	Input Voltage:100V-240V~50/60Hz, 0.75A					
Adapter	HW-050450A00	Technologies	Output Voltage: 5V === 2A OR4.5V === 5A					
		Co.,Ltd.	OR 5V === 4.5A					
Adaptor	LIW 050450501	Huawei	Input Voltage:100V-240V~50/60Hz, 0.75A					
Adapter	HW-050450E01	Technologies	Output Voltage: 5V === 2A OR4.5V === 5A					



Sub-Assembly							
Sub-Assembly Name	Model	Manufacturer	Description				
		Co.,Ltd.	OR 5V === 4.5A				
		Huawei	Input Voltage:100V-240V~50/60Hz, 0.75A				
Adapter	HW-050450A01	Technologies	Output Voltage: 5V === 2A OR4.5V === 5A				
		Co.,Ltd.	OR 5V === 4.5A				
Li ion Dolymor		Huawei	Rated capacity: 3550mAh				
Li-ion Polymer	HB436380ECW	Technologies	Nominal Voltage: +3.85V				
Battery		Co.,Ltd.	Charging Voltage: +4.43V				



# 4.3 Technical Description

NOTE: For the detailed technical descriptions, see the applicant/manufacturer's specifications or user manual.

Characteristics	Description	
TX/RX Operating	2400-2483.5	fc = 2402 MHz + N * 2 MHz, where:
Range	MHz band	- fc = "Operating Frequency" in MHz,
		- N = "Channel Number" with the range from 0 to 39.
Modulation Type	Digital	GFSK,
Emission Designator	GFSK for BT 4.2	:: 1M03FXD; GFSK for BT 5.0: 2M07FXD
Bluetooth Power Class	Class 1	
Antenna	Description	Isotropic Antenna
	Туре	
		☐ External
		☐ Dedicated
	Ports	
	Gain	-2.56dBi (per antenna port, max.)
	Remark	When the EUT is put into service, the practical maximum
		antenna gain should NOT exceed the value as described
		above.
Power Supply	Туре	☐ External DC mains,
		Battery,
		☐ AC/DC Adapter,
		Powered over Ethernet (PoE).
		☐ Other



# 5 General Test Conditions / Configurations

# 5.1 EUT Configurations

# 5.1.1 General Configurations

Configuration	Description		
Test Antenna Ports	Until otherwise specified,		
	- All TX tests are performed at all TX antenna ports of the EUT, and		
	- All RX tests are performed at all RX antenna ports of the EUT.		
Multiple RF Sources	Other than the tested RF source of the EUT, other RF source(s) are disabled or shutdown		
	during measurements.		

# 5.1.2 Customized Configurations

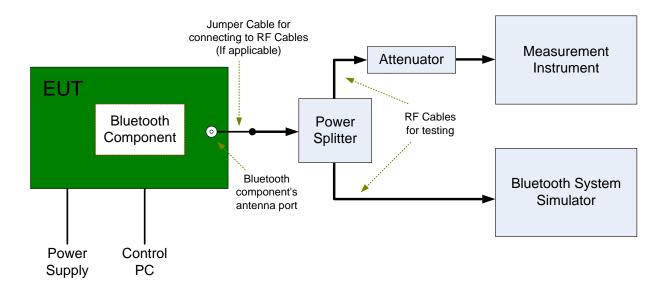
# EUT Conf.	Signal Description	Operating	Duty
		Frequency	cycle
TM1_Ch0	GFSK for BT 4.2 modulation, package type DH5,	Ch No. 0 / 2402	60.8%
	hopping off.	MHz	
TM1_Ch19	GFSK for BT 4.2 modulation, package type DH5,	Ch No. 19 / 2440	60.70%
	hopping off.	MHz	
TM1_Ch39	GFSK for BT 4.2 modulation, package type DH5,	Ch No. 39 / 2480	60.8%
	hopping off.	MHz	
TM2_Ch0	GFSK for BT 5.0 modulation, package type DH5,	Ch No. 0 / 2402	56.90%
	hopping off.	MHz	30.90%
TM2_Ch19	GFSK for BT 5.0 modulation, package type DH5,	Ch No. 19 / 2440	56.90%
	hopping off.	MHz	30.90%
TM2_Ch39	GFSK for BT 5.0 modulation, package type DH5,	Ch No. 39 / 2480	56.93%
	hopping off.	MHz	ან.ყა <i>7</i> 6



#### 5.2 Test Setups

#### 5.2.1 Test Setup 1

The Bluetooth component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by Bluetooth System Simulator and/or PC/software to emit the specified signals for the purpose of measurements.

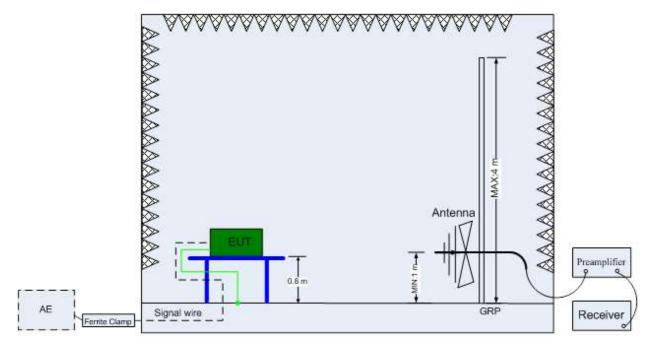


#### 5.2.2 Test Setup 2

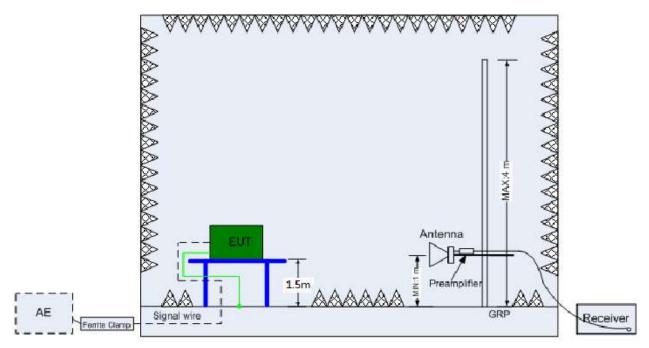
The semi-anechoic chamber and full-anechoic chamber has met the requirement of ANSI C63.4. The test distance is 3m.The setup is according to ANSI C63.4 and CAN/CSA-CEI/IEC CISPR 22.

The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).





(Below 1 GHz)



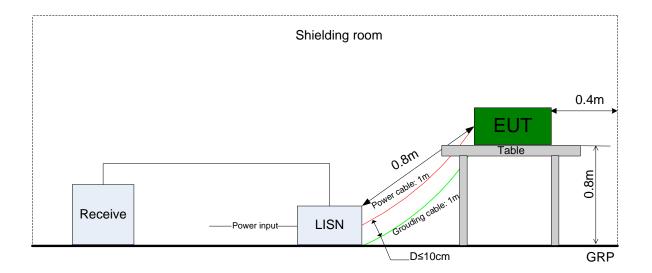
(Above 1 GHz)



#### 5.2.3 Test Setup 3

The mains cable of the EUT (maybe per AC/DC Adapter) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.1 m.





#### 5.3 Test Conditions

Test Case	Test Conditions					
	Configuration	guration Description				
6dB Emission	Meas. Method	FCC KDB 558074	D01 §8.2 Option 2.			
Bandwidth (EBW)	Test Env.	TN/VN	TN/VN			
	Test Setup	Test Setup 1				
	EUT Conf.	TM1_Ch0, TM1_C	h19, TM1_Ch39.			
		TM2_Ch0, TM2_C	h19, TM2_Ch39.			
Occupied	Meas. Method	FCC KDB 558074	D01 §8.2 Option 2.			
Bandwidth	Test Env.	TN/VN				
	Test Setup	Test Setup 1				
	EUT Conf.	TM1_Ch0, TM1_C	h19, TM1_Ch39.			
		TM2_Ch0, TM2_C	h19, TM2_Ch39.			
Maximum peak	Meas. Method	FCC KDB 558074	D01 §8.3.1.1			
Conducted Output	Test Env.	TN/VN				
Power	Test Setup	Test Setup 1				
	EUT Conf.	TM1_Ch0, TM1_C	h19, TM1_Ch39.			
		TM2_Ch0, TM2_Ch19, TM2_Ch39.				
Maximum Power	Meas. Method	FCC KDB 558074	D01 §8.4			
Spectral Density	Test Env.	TN/VN				
Level	Test Setup	Test Setup 1				
	EUT Conf.	TM1_Ch0, TM1_C	h19, TM1_Ch39.			
		TM2_Ch0, TM2_C	h19, TM2_Ch39.			
Band edge spurious	Meas. Method	FCC KDB 558074	D01§8.7			
emission	Test Env.	TN/VN				
	Test Setup	Test Setup 1				
	EUT Conf.	TM1_Ch0, TM1_C	h39.			
		TM2_Ch0, TM2_C	h39.			
Unwanted	Meas. Method	FCC KDB 558074	D01§8.5			
Emissions into	Test Env.	TN/VN				
Non-Restricted	Test Setup	Test Setup 1				
Frequency Bands	EUT Conf.	TM1_Ch0, TM1_C	h19, TM1_Ch39.			
		TM2_Ch0, TM2_C	h19, TM2_Ch39.			
Unwanted	Meas. Method	ANSI C63.10; FCC	KDB 558074 D01§8.6, Radiated			
Emissions into	Test Env.	TN/VN				
Restricted	Test Setup	Test Setup 2				
Frequency Bands	EUT Conf.	30 MHz -1 GHz	TM1_Ch0 (Worst Conf.). TM2_Ch0 (Worst Conf.).			
(Radiated)		1-3 GHz	TM1_Ch0, TM2_Ch39.			
			TM2_Ch0, TM2_Ch39.			
		3-18 GHz	TM1_Ch19 (Worst Conf.), TM2_Ch19 (Worst Conf.),			
		18-26.5 GHz	TM1_Ch0 (Worst Conf.). TM2_Ch0 (Worst Conf.).			



Test Case	Test Conditions	Description				
	Configuration					
AC Power Line	Meas. Method	AC mains conducted.				
Conducted		Pre: RBW = 10 kHz; Det. = Peak.				
Emissions		Final: RBW = 9 kHz; Det. = CISPR Quasi-Peak & Average.				
	Test Env.	TN/VN				
	Test Setup	Test Setup 3				
	EUT Conf.	TM1_Ch39, TM2_Ch39,				



#### 6 Main Test Instruments

#### 6.1.1 Test Location 1:

This table gives a complete overview of the RF measurement equipment.

Devices used during the test described are marked  $\square$ 

Marked	Equipment Name	Manufacturer	Model	Serial Number	Cal Date	Cal-Due		
	JS1120-3 BT/WIFI test system	JS Tonscend	JS0806-2	188060102	2018/05/30	2019/05/30		
	Power Detecting & Samplig Unit	R&S	OSP-B157	101429	2018/07/23	2019/07/23		
	Power Sensor	R&S	NRP2	103085/106211	2018/05/17	2019/05/17		
	DC Power Supply	KEITHLEY	2303	1342889	2018/10/24	2019/10/24		
	DC Power Supply	KEITHLEY	2303	000500E	2018/05/21	2019/05/21		
	DC Power Supply	KEITHLEY	2303	000381E	2018/05/21	2019/05/21		
	DC Power Supply	KEITHLEY	2303	000510E	2018/05/21	2019/05/21		
	Temperature Chamber	WEISS	WKL64	5624600294001 0	2018/12/13	2019/12/13		
$\boxtimes$	Spectrum Analyzer	Agilent	N9030A	MY51380032	2018/07/23	2019/07/23		
	Spectrum Analyzer	Agilent	N9030A	MY49431698	2018/07/23	2019/07/23		
	Spectrum Analyzer	Keysight	N9040B	MY57212529	2018/06/28	2019/06/28		
	Signal Analyzer	R&S	FSQ31	200021	2018/07/23	2019/07/23		
	Signal Analyzer	R&S	FSU26	201069	2018/11/2	2019/11/2		
	Universal Radio Communication Tester	R&S	CMW500	164699	2018/03/15	2019/03/15		
	Universal Radio Communication Tester	R&S	CMW500	159302	2018/07/23	2019/07/23		
	Wireless Communication Test set	Agilent	N4010A	MY49081592	2018/07/23	2019/07/23		
$\boxtimes$	Signal generator	Agilent	E8257D	MY51500314	2018/04/27	2019/04/27		
	Signal generator	Agilent	E8257D	MY49281095	2018/07/23	2019/07/23		
	Vector Signal Generator	R&S	SMW200A	103447	2018/05/31	2019/05/31		
	Vector Signal Generator	R&S	SMU200A	104162	2018/07/23	2019/07/23		

Marked	Equipment Name Manufacturer Model Serial Number Cal Date Cal-Due							
	Test receiver	R&S	ESU26	100387	2018/01/20	2019/01/19		
$\boxtimes$	Test receiver	R&S	ESCI	101163	2018/01/20	2019/01/19		
	Artificial Main Network	R&S	ENV4200	100134	2018/05/08	2019/05/07		
$\boxtimes$	Line Impedance Stabilization Network	R&S	ENV216	100382	2018/05/08	2019/05/07		
$\boxtimes$	Measurement Software	R&S	EMC32 V9.25.0	/	/	/		



# 6.1.2 Sub-contracted Test Location 1:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMI Test	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Aug. 30,	Aug.29,	Radiation
Receiver&SA	Agilent	N9036A	WIT 32200 103	20112~20.3G112	2018	2019	(03CH01-SZ)
Loop	R&S	HFH2-Z2	100354	9kHz~30MHz	May.29,	May.29,	Radiation
Antenna	Nao	111112-22	100354	9KI 12~30IVII 12	2018	2020	(03CH01-SZ)
Bilog	TeseQ	CBL6112D	35407	30MHz-2GHz	Jun. 5,	Jun. 4,	Radiation
Antenna	16560	CBL0112D	33 <del>4</del> 07	301VII 12-2GI 12	2018	2019	(03CH01-SZ)
Double Ridge Horn	ETS Lindgren	3117	119436	1GHz~18GHz	Jun. 28,	Jun. 27,	Radiation
Antenna	E 13 Linugien	3117	119430	IGHZ~16GHZ	2018	2019	(03CH01-SZ)
SHF-EHF	com-power	AH-840	101071	18Ghz-40GHz	Mar.30,	Mar.29,	Radiation
Horn					2018	2019	(03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 20,	Apr.19,	Radiation
					2018	2019	(03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101	1707137	1GHz~18GHz	Oct.18,	Oct 17,	Radiation
Til Ampliner	WIIILQ	800-30-10P-R	1707137	10112~100112	2018	2019	(03CH01-SZ)
UE Amplifier	KEYSIGHT	83017A	MY53270104	0.5GHz~26.5Ghz	Dec.27,	Dec 26,	Radiation
HF Amplifier	KETSIGHT	63017A	WIT53270104	0.5GHZ~26.5GHZ	2017	2018	(03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul.17.2018	Jul.16.2019	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	NCR	Radiation (03CH01-SZ)

Software Information			
Test Item	Software Name	Manufacturer	Version
RE	E3	AUDIX	6.2009-8-24(sporton)



#### 7 Measurement Uncertainty

For a 95% confidence level (k = 2), the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 as following:

Test Item	Extended Uncertainty	
Transmit Output Power Data	Power [dBm]	U = 0.39 dB
RF Power Density, Conducted	Power [dBm]	U = 0.64 dB
Bandwidth	Magnitude [%]	U=7%
Band Edge Compliance	Disturbance Power [dBm]	U = 0.9 dB
Spurious Emissions, Conducted	Disturbance Power [dBm]	20MHz~3.6GHz: U=0.88dB
		3.6GHz~8.4GHz: U=1.08dB
		8.4GHz~13.6GHz: U=1.24dB
		13.6GHz~22GHz: U=1.34dB
		22GHz~26.5GHz: U=1.36dB
Field Strength of Spurious	ERP/EIRP [dBm]	For 3 m Chamber:
Radiation		U = 5.90 dB (30 MHz-1 GHz)
		U = 4.94 dB (1 GHz-18 GHz)
		U = 4.24 dB (18 GHz-26.5 GHz)
Frequency Stability	Frequency Accuracy [Hz]	U=41.58Hz
AC Power Line Conducted	Disturbance	U=2.3 dB
Emissions	Voltage[dBµV]	
Duty Cycle	Duty Cycle [%]	U=±2.06 %

**END**