



FCC RF Test Report

Product Name: Smart Phone

Model Number: VOG-L29/VOG-L09

Report No.: SYBH(Z-RF)20181224014002-2004

FCC ID : QISVOG-LX9

Authorized	APPROVED (Lab Manager)	PREPARED (Test Engineer)
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DATE	2019-01-28	2019-01-28

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MODIFICATION RECORD

No.	Report No	Modification Description
1	SYBH(Z-RF)201812240140 02-2004	First release.

DECLARATION

Type	Description
Multiple Models Applications	<p><input type="checkbox"/> The present report applies to single model.</p> <p><input checked="" type="checkbox"/> The present report applies to several models. The practical measurements are performed with the model <u>VOG-L29</u>.</p> <p>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</p> <p>All others between these models are identical.</p> <p>The present report only presents the worst test case of all modes, see relevant test results for detailed.</p>

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2 General Information

2.1 Test standard/s

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

2.2 Test Environment

Temperature :	TN	15 to 30	°C during room temperature tests
Ambient Relative Humidity:	20 to 85 %		
Atmospheric Pressure:	Not applicable		
Power supply :	VL	3.6	V
	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., LTD.
Address of Test Location 1 :	No.2, New City Avenue, Songshan Lake Sci. & Tech. Industry Park, Dongguan, 523808, P.R.C

2.4 Applicant and Manufacturer

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

2.5 Application details

Date of Receipt Sample:	2019-01-02
Start of test:	2019-01-03
End of test:	2019-01-28

3 Test Summary

Test Item	FCC Rule No.	Requirements	Test Result	Verdict
DTS (6 dB) Bandwidth	15.247(a)(2)	≥ 500 kHz.	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
Occupied Bandwidth	---	No limit.	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
Duty Cycle	KDB 558074 D01 (6.0)	No limit.	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
Maximum Conducted Peak Output Power	15.247(b)(3)	FCC: For directional gain: Conducted < 30 dBm – (G[dBi] – 6 [dB]); Otherwise: Conducted < 30 dBm,	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
Maximum Power Spectral Density Level	15.247(e)	Conducted < 8 dBm/3 kHz.	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
Band Edges Compliance	15.247(d)	< -20 dBm/100 kHz if total peak power ≤ power limit.	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
Unwanted Emissions into Non-Restricted Frequency Bands			Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
Unwanted Emissions into Restricted Frequency Bands (Radiated)	15.247(d) 15.209 (NOTE 1)	FCC Part 15.209 field strength limit;	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
AC Power Line Conducted Emissions	15.207	FCC Part 15.207 conducted limit;	Refer to No. SYBH(Z-RF)20181218028001-2004	PASS
<p>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.</p> <p>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</p> <p>Note3: We do not test Bluetooth BLE of VOG-L29/VOG-L09, all test data can refer to No. SYBH(Z-RF)20181218028001-2004 of VOG-L04(FCC ID:QISVOG-L04).</p>				

4 Description of the Equipment under Test (EUT)

4.1 General Description

VOG-L29 is a 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 LTE frequency band is B1 and B2 and B3 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 B40 and B41. 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, Bluetooth, NFC, Wi-Fi and Wirelessly Charging etc. VOG-L29 is a dual SIM smart phone, and one of the SIM card interfaces could be used as Nano memory card interface. Externally it provides type C USB charging port, and the port could be used as the earphone port or data-transfer port.

VOG-L09 is a 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 LTE frequency band is B1 and B2 and B3 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 B40 and B41. 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, Bluetooth, NFC, Wi-Fi and Wirelessly Charging etc. VOG-L09 provides one SIM card interface and one Nano memory card interface. Externally it provides type C USB charging port, and the port could be used as the earphone port or data-transfer port.

The difference between VOG-L29 and VOG-L09

The only difference between VOG-L29 and VOG-L09 is that VOG-L09 deletes into single SIM card by software. Other parts of the two models are the same.

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

Model	VOG-L29	VOG-L04
PCB	The same	The same
Frequency-G SM	The same	The same
Frequency-W CDMA	The same	The same

Frequency-LTE	The same Support B32 Unsupport B66	Different Support B66 Unsupport B32
4*4 Mimo	The same Support B1、B3、B7	Different Support B2、B4、B7、B66
SIM Card	Dual	Single
Hardware	B32 RF circuit Support B32 Location ID: SAW filter:Z3401,Z4104, B32 Diplexer:Z3402,Z5403 RF low noise amplifier:U3405,U4103 Capacitor:C3422,C3423,C3425,C3442,C2912,C3411,L3533,L4416,C3418,C4102 Inductor:L3412,L3422,L3413,L3408,L4124,L4137,L4139,L4140 Function Description:B32 main RF circuit and diversity RF circuit	Unsupport B32 Delete components related to the B32 RF circuit.
	4*4 MIMO(the 3rd & 4th antenna) Support B1/3/7 4*4MIMO and delete/replace components related circuit; Location ID: B1/3/7 SAW filter of the 4th antenna :Z4403 (Vendor:KYOCERA type:SF18-1842M8SUA3) SAW filter of the 3rd antenna :Z4301 (Vendor:KYOCERA type:SF18-1842M8SUA3) Capacitor:L5507,C5401,C5402,C5517,C3411,L3533,L4416 Inductor:L5510,L4330,L5415,L3408,L4419 Function Description: B1/3/7 4*4MIMO RF circuit	Support B2/7/66(4) 4*4MIMO and delete/replace components related circuit; Location ID: B2/7/66(4) SAW filter: SAW filter of the 4th antenna :Z4403 (Vendor:MURATA type:SATEY1G96AU3F0AR00) SAW filter of the 3rd antenna :Z4301 (Vendor:MURATA type:SATEY1G96AU3F0AR00) Inductor:L4419,L4412,L4416,C5444,C5407,L5510 Function Description:B2/7/66(4) 4*4MIMO RF circuit

	B1/B3/ B32 & B2/B66 RF &CA circuit	<p>Unsupport B66 and delete/replace components related circuit;</p> <p>Support CA_1-3-32 Location ID: B1/B3 Quadruplexer:Z3502(Vendor:QORVO, type:QM25002TR13-5KHW) Capacitor:C3533 B2 SAW filter: Z4101(Vendor:MURATA ect. type:SAFFB1G96AB0F0AR1X ect.) L4123,L4122,L3523,L3532,C3520,L3512,L4419 Function Description:B2 RX and CA_1-3-32 diplexer RF circuit</p>	<p>Unsupport CA_1-3-32 and delete/replace components related circuit;</p> <p>Support B66 &Support CA_2-66 Location ID: B2/B7/B66(4) diversity TRI SAW filter:Z4105 (Vendor:MURATA type:SATEY1G96AU3F0AR00) B2/B66(B4) Quadruplexer:Z3502(Vendor:KYOCERA type:SQ25-1745K6SUA4) Capacitor:C3401,C3402,C3504,L4110 Inductor:L3532,L4111,L4112,L4107,L4109,L4114,L4108,L4118,C3520,L3533,L3512 Function Description:B2/B66 Single-band and CA main and diversity RF circuits</p>
	B7 RX circuit	<p>B7 receive matching circuit include: Inductor:L4127,L4126</p>	<p>B7 receiving matching circuit is adjusted to include: Inductor:C4101 B7 diversity TRI SAW filter:Z4105(Vendor:MURATA type:SATEY1G96AU3F0AR00)</p>
Software	Different	Different	
Dimensions	The same	The same	
Appearance	The same	The same	
main antenna	The same	The same	
DIV antenna	The same	The same	
BT/Wi-Fi antenna	The same	The same	
MIMO antenna	The same	The same	
NFC	The same	The same	
WPC	The same	The same	
Supported CA configurations for DL CA	Different	Different	
Supported CA configurations for UL CA	The same	The same	
Others	NA	NA	

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

Note2: We do not test Bluetooth BLE of VOG-L29/VOG-L09, all test data can refer to No.

SYBH(Z-RF)20181218028001-2004 of VOG-L04(FCC ID:QISVOG-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	9.1.0.84(C432E84R1P1)	HL2VOGUEM

4.2.2 Sub- Assembly

Sub-Assembly			
Sub-Assembly Name	Model	Manufacturer	Description
Adapter	HW-100400A00	Huawei Technologies Co., Ltd.	Input voltage: 100-240V ~50/60Hz 1.2A Output voltage: 5V  2A OR 9V  2A OR 10V  4A
Adapter	HW-100400U00	Huawei Technologies Co., Ltd.	Input voltage: 100-240V ~50/60Hz 1.2A Output voltage: 5V  2A OR 9V  2A OR 10V  4A
Adapter	HW-100400E00	Huawei Technologies Co., Ltd.	Input voltage: 100-240V ~50/60Hz 1.2A Output voltage: 5V  2A OR 9V  2A OR 10V  4A
Adapter	HW-100400B00	Huawei Technologies Co., Ltd.	Input voltage: 100-240V ~50/60Hz 1.2A Output voltage: 5V  2A OR 9V  2A OR 10V  4A
Battery	HB486486ECW	Huawei Technologies Co., Ltd.	Rated capacity: 4100mAh Nominal Voltage:  +3.82V Charging Voltage:  +4.4V

4.3 Technical Description

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

Characteristics	Description	
TX/RX Operating Range	2400-2483.5 MHz band	$f_c = 2402 \text{ MHz} + N * 2 \text{ MHz}$, where: - f_c = “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: 1M04FXD GFSK for BT 5.0: 2M07KFXD	
Bluetooth Power Class	Class 1	
Antenna	Description	Isotropic Antenna
	Type	<input checked="" type="checkbox"/> Integral <input type="checkbox"/> External <input type="checkbox"/> Dedicated
	Ports	<input checked="" type="checkbox"/> Ant 1, <input type="checkbox"/> Ant 2, <input type="checkbox"/> Ant 3
	Gain	-1.4 dBi (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	Type	<input type="checkbox"/> External DC mains, <input checked="" type="checkbox"/> Battery, <input type="checkbox"/> AC/DC Adapter, <input type="checkbox"/> Powered over Ethernet (PoE). <input type="checkbox"/> 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.

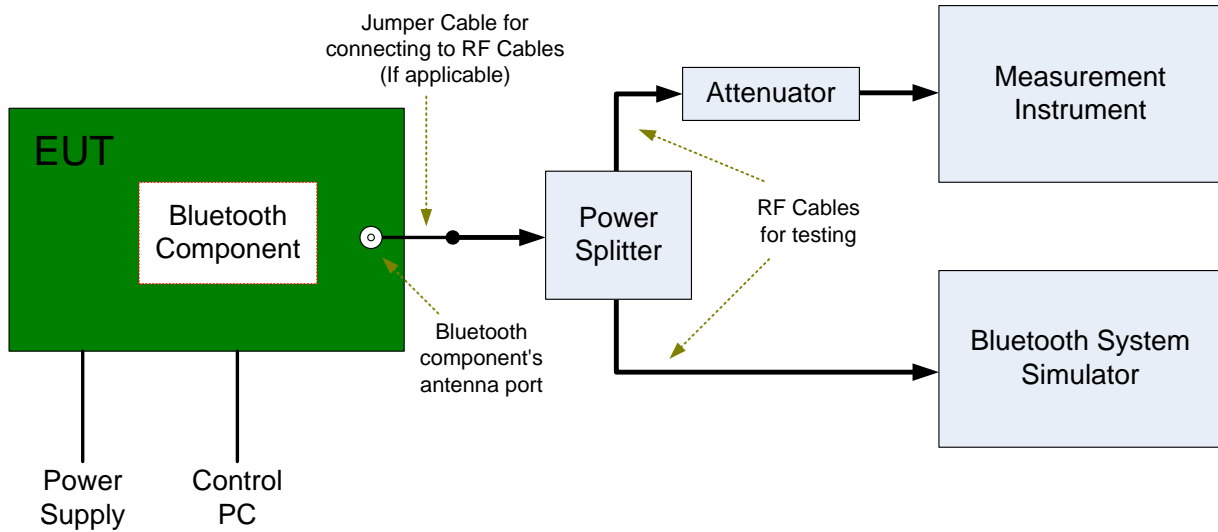
5.1.2 Customized Configurations

# EUT Conf.	Signal Description	Operating Frequency	Duty cycle
TM1_Ch0	GFSK for BT 4.2 modulation, package type DH5, hopping off.	Ch No. 0 / 2402 MHz	60.80%
TM1_Ch19	GFSK for BT 4.2 modulation, package type DH5, hopping off.	Ch No. 19 / 2440 MHz	60.70%
TM1_Ch39	GFSK for BT 4.2 modulation, package type DH5, hopping off.	Ch No. 39 / 2480 MHz	60.80%
TM2_Ch0	GFSK for BT 5.0 modulation, package type DH5, hopping off.	Ch No. 0 / 2402 MHz	56.92%
TM2_Ch19	GFSK for BT 5.0 modulation, package type DH5, hopping off.	Ch No. 19 / 2440 MHz	56.90%
TM2_Ch39	GFSK for BT 5.0 modulation, package type DH5, hopping off.	Ch No. 39 / 2480 MHz	56.90%

5.2 Test Setups

5.2.1 Test Setup 1

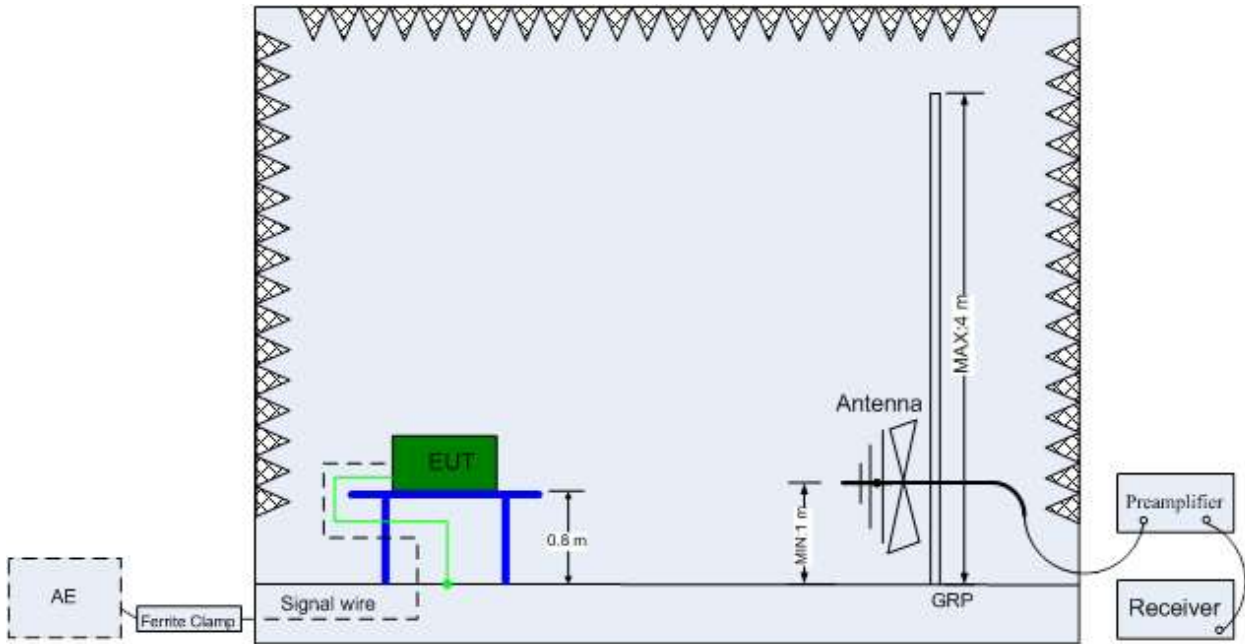
The Bluetooth component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by Bluetooth System Simulator and/or PC/software to emit the specified signals for the purpose of measurements.



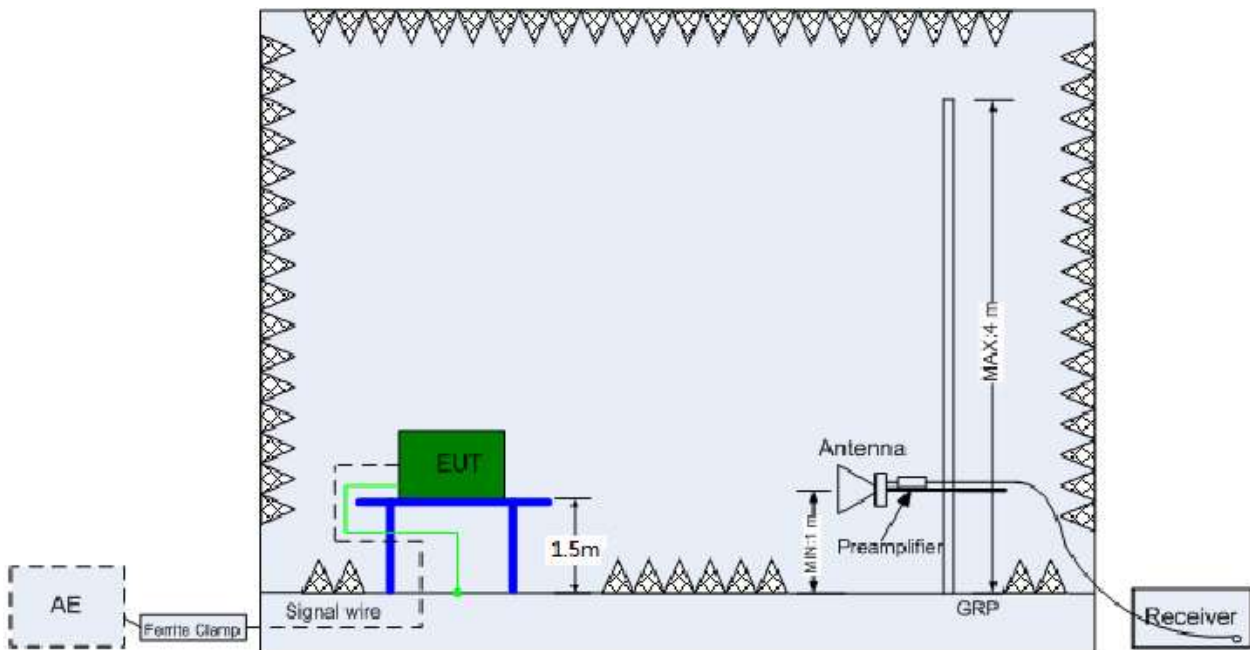
5.2.2 Test Setup 2

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)

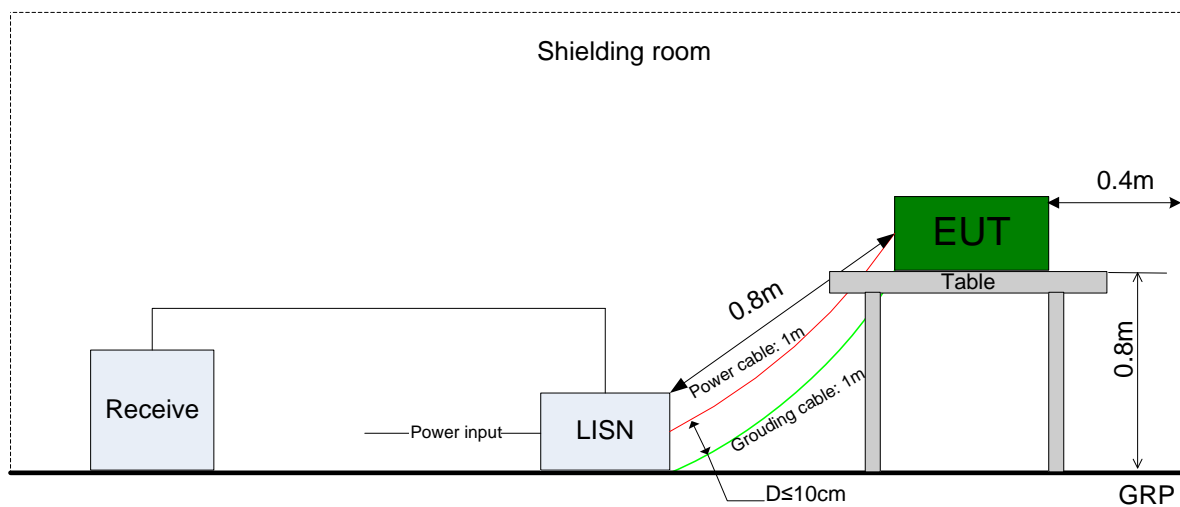


(Above 1 GHz)

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	Description		
6dB Emission Bandwidth (EBW)	Meas. Method	FCC KDB 558074 D01 §8.2 Option 2.		
	Test Env.	TN/VN		
	Test Setup	Test Setup 1		
	EUT Conf.	TM1_Ch0, TM1_Ch19, TM1_Ch39. TM2_Ch0, TM2_Ch19, TM2_Ch39.		
Occupied Bandwidth	Meas. Method	FCC KDB 558074 D01 §8.2 Option 2.		
	Test Env.	TN/VN		
	Test Setup	Test Setup 1		
	EUT Conf.	TM1_Ch0, TM1_Ch19, TM1_Ch39. TM2_Ch0, TM2_Ch19, TM2_Ch39.		
Maximum peak Conducted Output Power	Meas. Method	FCC KDB 558074 D01 §8.3.1.1		
	Test Env.	TN/VN		
	Test Setup	Test Setup 1		
	EUT Conf.	TM1_Ch0, TM1_Ch19, TM1_Ch39. TM2_Ch0, TM2_Ch19, TM2_Ch39.		
Maximum Power Spectral Density Level	Meas. Method	FCC KDB 558074 D01 §8.4		
	Test Env.	TN/VN		
	Test Setup	Test Setup 1		
	EUT Conf.	TM1_Ch0, TM1_Ch19, TM1_Ch39. TM2_Ch0, TM2_Ch19, TM2_Ch39.		
Band edge spurious emission	Meas. Method	FCC KDB 558074 D01§8.7		
	Test Env.	TN/VN		
	Test Setup	Test Setup 1		
	EUT Conf.	TM1_Ch0, TM1_Ch39. TM2_Ch0, TM2_Ch39.		
Unwanted Emissions into Non-Restricted Frequency Bands	Meas. Method	FCC KDB 558074 D01§8.5		
	Test Env.	TN/VN		
	Test Setup	Test Setup 1		
	EUT Conf.	TM1_Ch0, TM1_Ch19, TM1_Ch39. TM2_Ch0, TM2_Ch19, TM2_Ch39.		
Unwanted Emissions into Restricted Frequency Bands (Radiated)	Meas. Method	ANSI C63.10; FCC KDB 558074 D01§8.6, Radiated		
	Test Env.	TN/VN		
	Test Setup	Test Setup 2		
	EUT Conf.	30 MHz -1 GHz	TM1_Ch0 (Worst Conf.). TM2_Ch0 (Worst Conf.).	
		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	
	Configuration	Description
AC Power Line Conducted Emissions	Meas. Method	AC mains conducted. Pre: RBW = 10 kHz; Det. = Peak. 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

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

Devices used during the test described are marked

<input checked="" type="checkbox"/> Main Test Equipment (BT/WIFI test system)						
Marked	Equipment Name	Manufacturer	Model	Serial Number	Cal Date	Cal-Due
<input checked="" type="checkbox"/>	JS1120-3 BT/WIFI test system	JS Tonscend	JS0806-2	/	2018/05/30	2019/05/30
<input type="checkbox"/>	Power Detecting & Samplig Unit	R&S	OSP-B157	101429	2018/07/23	2019/07/23
<input type="checkbox"/>	Power Sensor	R&S	NRP2	103085/106211	2018/05/17	2019/05/17
<input type="checkbox"/>	DC Power Supply	KEITHLEY	2303	1342889	2018/10/24	2019/10/24
<input type="checkbox"/>	DC Power Supply	KEITHLEY	2303	000500E	2018/05/21	2019/05/21
<input type="checkbox"/>	DC Power Supply	KEITHLEY	2303	1288003	2018/05/21	2019/05/21
<input type="checkbox"/>	DC Power Supply	KEITHLEY	2303	000381E	2018/05/21	2019/05/21
<input type="checkbox"/>	DC Power Supply	KEITHLEY	2303	000510E	2018/10/24	2019/10/24
<input type="checkbox"/>	Temperature Chamber	WEISS	WKL64	56246002940010	2018/12/13	2019/12/13
<input checked="" type="checkbox"/>	Spectrum Analyzer	Agilent	N9030A	MY51380032	2018/07/23	2019/07/23
<input type="checkbox"/>	Spectrum Analyzer	Agilent	N9030A	MY49431698	2018/07/23	2019/07/23
<input type="checkbox"/>	Spectrum Analyzer	Keysight	N9040B	MY57212529	2018/06/28	2019/06/28
<input type="checkbox"/>	Signal Analyzer	R&S	FSQ31	200021	2018/07/23	2019/07/23
<input type="checkbox"/>	Signal Analyzer	R&S	FSU26	201069	2018/11/2	2019/11/2
<input type="checkbox"/>	Universal Radio Communication Tester	R&S	CMW500	164699	2018/03/15	2019/03/15
<input type="checkbox"/>	Universal Radio Communication Tester	R&S	CMW500	159302	2018/07/23	2019/07/23
<input type="checkbox"/>	Wireless Communication Test set	Agilent	N4010A	MY49081592	2018/07/23	2019/07/23
<input checked="" type="checkbox"/>	Signal generator	Agilent	E8257D	MY51500314	2018/04/27	2019/04/27
<input type="checkbox"/>	Signal generator	Agilent	E8257D	MY49281095	2018/07/23	2019/07/23
<input type="checkbox"/>	Vector Signal Generator	R&S	SMW200A	103447	2018/05/31	2019/05/31
<input type="checkbox"/>	Vector Signal Generator	R&S	SMU200A	104162	2018/07/23	2019/07/23

<input checked="" type="checkbox"/> Main Test Equipment (CE test system)						
Marked	Equipment Name	Manufacturer	Model	Serial Number	Cal Date	Cal-Due
<input type="checkbox"/>	Test receiver	R&S	ESU26	100387	2019/01/15	2020/01/14
<input checked="" type="checkbox"/>	Test receiver	R&S	ESCI	101163	2019/01/15	2020/01/14
<input type="checkbox"/>	Artificial Main Network	R&S	ENV4200	100134	2018/05/08	2019/05/07
<input checked="" type="checkbox"/>	Line Impedance Stabilization Network	R&S	ENV216	100382	2018/05/08	2019/05/07

<input checked="" type="checkbox"/>	Measurement Software	R&S	EMC32 V9.25.0	/	/	/
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<input checked="" type="checkbox"/> Main Test Equipment(RE test system)						
Marked	Equipment Name	Manufacturer	Model	Serial Number	Cal Date	Cal-Due
<input checked="" type="checkbox"/>	Test receiver	R&S	ESU26	100387	2019/01/15	2020/01/14
<input checked="" type="checkbox"/>	LOOP Antennas(9kHz-30M Hz)	R&S	HFH2-Z2	100262	2017/04/25	2019/04/25
<input type="checkbox"/>	LOOP Antennas(9kHz-30M Hz)	R&S	HFH2-Z2	100263	2017/04/25	2019/04/25
<input checked="" type="checkbox"/>	Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-357	2017/04/21	2019/04/20
<input type="checkbox"/>	Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-520	2017/3/29	2019/3/28
<input type="checkbox"/>	Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-491	2017/3/29	2019/3/28
<input type="checkbox"/>	Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-356	2018/4/9	2020/4/8
<input checked="" type="checkbox"/>	Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF907	100305	2017/4/21	2019/4/20
<input type="checkbox"/>	Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF906	100684	2017/5/27	2019/5/26
<input type="checkbox"/>	Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF906	100683	2017/3/29	2019/3/28
<input checked="" type="checkbox"/>	Pyramidal Horn Antenna(18GHz-26.5 GHz)	ETS-Lindgren	3160-09	5140299	2017/07/20	2019/07/19
<input type="checkbox"/>	Pyramidal Horn Antenna(18GHz-26.5 GHz)	ETS-Lindgren	3160-09	00206665	2018/4/21	2020/4/20
<input checked="" type="checkbox"/>	Pyramidal Horn Antenna(26.5GHz-40 GHz)	ETS-Lindgren	3160-10	00205695	2018/04/20	2020/04/19
<input type="checkbox"/>	Pyramidal Horn Antenna(26.5GHz-40 GHz)	ETS-Lindgren	3160-10	LM5947	2017/07/20	2019/07/19

	GHz)					
<input checked="" type="checkbox"/>	Measurement Software	R&S	EMC32 V9.25.0	/	/	/

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 Radiation	ERP/EIRP [dBm]	For 3 m Chamber: 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 Emissions	Disturbance Voltage[dBμV]	U=2.3 dB
Duty Cycle	Duty Cycle [%]	U=±2.06 %

END