



中国认可  
国际互认  
检测  
TESTING  
CNAS L0310



# FCC RF Test Report

**Product Name: Smart Phone**

**Model Number: CLT-L29**

**Report No.: SYBH(Z-RF)20171128003001-2006**

**FCC ID: QISCLT-L29**

**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,  
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## Notice

1. The laboratory has passed the accreditation by China National Accreditation Service for Conformity Assessment (CNAS). The accreditation number is L0310.
2. The laboratory has passed the accreditation by The American Association for Laboratory Accreditation (A2LA). The accreditation number is 2174.01.
3. The laboratory has been recognized by the US Federal Communications Commission (FCC) to perform compliance testing subject to the Commission's Declaration Of Conformity (DOC) and Certification rules. The Designation Number is CN1173, and the Test Firm Registration Number is 294140.
4. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 6369A-1.
5. The laboratory (Reliability Lab 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.
6. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
7. The test report is invalid if there is any evidence of erasure and/or falsification.
8. The test report is only valid for the test samples.
9. 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.



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

**Date of Receipt Sample:** 2018-01-08  
**Start Date of Test:** 2018-01-08  
**End Date of Test:** 2018-02-07

**Test Result:** Pass

<b>Approved by Senior Engineer:</b>	2018-02-07	Roger zhang	<i>Roger Zhang</i>
	Date	Name	Signature

<b>Prepared by:</b>	2018-02-07	Pan Man	<i>Panman</i>
	Date	Name	Signature



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# 1 General Information

<b>1.1 Applied Standard</b>	
Applied Rules:	47 CFR FCC Part 02 FCC Part 15 Subpart C (15.225)
<b>1.2 Test Location</b>	
Test Location 1:	Reliability Laboratory of Huawei Technologies Co., Ltd.
Address:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C
<b>1.3 Test Environmental Condition</b>	
Ambient Temperature:	20 – 25 °C
Ambient Relative Humidity:	45 – 55 %
Atmospheric Pressure:	101 kPa



## 2 Summary

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Reference
<b>TRANSMITTER MODE</b>					
15.225 (a)	In-Band Emissions	15,848 $\mu$ V/m @ 30m 13.553 – 13.567 MHz	RADIATED	refer to report No.:SYBH(Z-RF)20171129004001-2002	Section 5.2
2.1049	20 dB Bandwidth	N/A		refer to report No.:SYBH(Z-RF)20171129004001-2002	Section 5.1
15.225(b)	In-Band Emissions	334 $\mu$ V/m @ 30m 13.410 – 13.553 MHz 13.567 – 13.710 MHz		refer to report No.:SYBH(Z-RF)20171129004001-2002	Section 5.2
15.225(c)	In-Band Emissions	106 $\mu$ V/m @ 30m 13.110 – 13.410 MHz 13.710 – 14.010 MHz		refer to report No.:SYBH(Z-RF)20171129004001-2002	Section 5.2
15.225(d) 15.209	Out-of-Band Emissions	Emissions outside of the specified band (13.110 – 14.010 MHz) must meet the radiated limits detailed in 15.209		refer to report No.:SYBH(Z-RF)20171129004001-2002	Section 5.3
15.225(e)	Frequency Stability Tolerance	$\pm$ 0.01% of Operating Frequency	Temperature Chamber	refer to report No.:SYBH(Z-RF)20171129004001-2002	Section 5.4
15.207	AC Conducted Emissions 150kHz – 30MHz	< FCC 15.207 limits	LINE CONDUCTED	refer to report No.:SYBH(Z-RF)20171129004001-2002	Section 5.5



### 3 Product Description

#### 3.1 Product Information

CLT-L29 is subscriber equipment in the LTE/ WCDMA/GSM system. The LTE frequency band is Band 1,Band 2,Band 3,Band 4,Band 5, Band 6, Band 7,Band 8, Band 9,Band 12,Band17, Band 18 ,Band 19, Band 20, Band 26, Band 28, Band 32, Band 34,Band 38,Band39, Band 40 and Band 41.The HSUPA/HSDPA/UMTS frequency band is Band I, Band II, Band IV, Band V, Band VI, Band VIII and Band XIX.The GSM/GPRS/EDGE frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900.The Mobile Phone implements such functions as RF signal receiving/transmitting, LTE/ WCDMA /GSM protocol processing, voice, video, MMS service, GPS, NFC and WIFI etc. Externally it provides earphone port (to provide voice service) and dual USIM card interfaces. 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 CLT-L04 and model CLT -L29 is show in the below table:

	Model	CLT-L04	CLT-L29
Licensed Frequency	LTE BAND	FCC Band: B2/B4/ B5/B7/B12/B17/B26/B38/ B41 MIMO B4/B7	FCC Band: B2/B4/ B5/B7/B12/B17/B26/B38/ B41 MIMO B3/B7
	UMTS BAND	Band II/IV/V	Band II/IV/V
	GSM	GSM 850/1900	GSM 850/1900
	IC	the same	the same
	Antenna	the same	the same
	NFC	the same	the same
Unlicensed Frequency	Bluetooth	the same	the same
	2.4G Wi-Fi	the same	the same
	IC	the same	the same
	Antenna	4*4 MIMO B4/B7 support RX and TX	4*4MIMO B3/B7 support RX and TX
Hardware	Ram / Rom	the same	the same
	Camera	the same	the same
	PCB	the same	the same
	USB Port	the same	the same
	SIM	Single	Dual
	Hardware version	the same	the same
RF	RF circuit	The PCB is same, only some capacitors, inductors are disabled and not affect FCC Band B5/ B12/B17/B26/B38/ B41, UMTS Band II/IV/V, GSM 850/1900	The PCB is same, only some capacitors, inductors are disabled and not affect FCC Band B5/ B12/B17/B26/B38/ B41, UMTS Band II/IV/V, GSM 850/1900



		The capacitors, inductors is matching the difference specifications for LTE B2/4/7(include CA band) The hardware channel of LTE B2/4/7(include CA band) is different and not affect other band	The capacitors, inductors is matching the difference specifications for LTE B2/4/7(include CA band) The hardware channel of LTE B2/4/7(include CA band) is different and not affect other band
Appearance	Dimension	the same	the same
	Color	different	different
Accessory	Battery	the same	the same
	External Charger	the same	the same
	USB label	the same	the same
	Earphone	the same	the same

NOTE1: Only NFC test data included in this report.

NOTE2: We do not test NFC of CLT-L29, all the test data can be refer to report No.:SYBH(Z-RF)20171129004001-2006 of CLT-L04(FCC ID:QISCLT-L04)





### 3.2 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.

#### 3.2.1 Board

Board		
Description	Hardware Version	Software Version
Main Board	HL1CLTM	CLT-L29 8.1.0.72(SP9C900)

#### 3.2.2 Sub-Assembly

Sub-Assembly			
Sub-Assembly Name	Model	Manufacturer	Description
Adapter	HW-050450B00	Huawei Technologies Co.,Ltd.	Input Voltage: 100V-240V~50/60Hz, 0.75A Output voltage: 5V  2A OR4.5V 5A OR 5V  4.5A Rated Power: 10W/22.5W
Adapter	HW-050450E00	Huawei Technologies Co.,Ltd.	Input Voltage: 100V-240V~50/60Hz, 0.75A Output Voltage: 5V  2A OR4.5V 5A OR 5V  4.5A Rated Power: 10W/22.5W
Adapter	HW-050450U00	Huawei Technologies Co.,Ltd.	Input Voltage: 100V-240V~50/60Hz, 0.75A Output Voltage: 5V  2A OR4.5V 5A OR 5V  4.5A Rated Power: 10W/22.5W
Adapter	HW-050450A00	Huawei Technologies Co.,Ltd.	Input Voltage: ~100-240V 50/60Hz 0.75A Output Voltage: 5V  2A OR4.5V 5A OR 5V  4.5A Rated Power: 10W/22.5W
Rechargeable Li-ion	HB436486ECW	Huawei Technologies Co.,Ltd.	Rated capacity: 3900mAh Nominal Voltage:  +3.82V Charging Voltage:  +4.4V



## 4 Main Test Instruments

Main Test Equipments					
Equipment Name	Manufacturer	Model	Serial Number	Cal Date	Cal- Due
Power supply	KEITHLEY	2303	000500E	2017/5/31	2018/5/30
Wireless Communication Test set	Agilent	N4010A	MY49081592	2017/7/31	2018/7/30
Universal Radio Communication Tester	R&S	CMU200	110932	2017/5/2	2018/5/1
Spectrum Analyzer	Agilent	N9020A	MY52090652	2017/7/10	2018/7/9
Universal Radio Communication Tester	R & S	CMW500	126854	2017/10/19	2018/10/18
Signal Analyzer	R&S	FSQ31	200021	2017/7/31	2018/7/30
Spectrum Analyzer	Agilent	N9030A	MY49431698	2017/7/31	2018/7/30
Temperature Chamber	WEISS	WKL64	56246002940010	2017/12/13	2018/12/12
Signal generator	Agilent	E8257D	MY49281095	2017/7/31	2018/7/30
Vector Signal Generator	R&S	SMU200A	104162	2017/7/31	2018/7/30
Test receiver	R&S	ESU26	100387	2017/2/21	2018/2/20
Test receiver	R&S	ESCI	101163	2017/2/21	2018/2/20
Spectrum analyzer	R&S	FSU3	200474	2017/2/21	2018/2/20
Spectrum analyzer	R&S	FSU43	100144	2017/2/21	2018/2/20
LOOP Antennas(9kHz-30MHz)	R&S	HFH2-Z2	100262	2017/4/25	2019/4/25
LOOP Antennas(9kHz-30MHz)	R&S	HFH2-Z2	100263	2017/4/25	2019/4/25
Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-490	2017/3/29	2019/3/29
Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-521	2017/4/9	2019/4/9
Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF907	100304	2017/5/27	2019/5/27
Pyramidal Horn Antenna(18GHz-26.5GHz)	ETS-Lindgren	3160-09	206665	2017/3/24	2018/3/23



Artificial Main Network	R&S	ENV4200	100134	2017/5/15	2018/5/14
Line Impedance Stabilization Network	R&S	ENV216	100382	2017/5/15	2018/5/14
Power Detecting & Sampling Unit	R&S	OSP-B157	100914	2017/7/31	2018/7/30
Software Information					
Test Item	Software Name		Manufacturer		Version
RE	EMC32		R&S		V9.25.0
CE	EMC32		R&S		V9.25.0

## 5 Test Results

VOID

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