FCC EMC TEST REPORT

Report NO.:	R201907014
Model NO.:	CB64
Grant No.:	JOY
FCC ID:	JOYCB64
Date of Receipt:	Jul 04, 2019
Date of Test:	Jul 22, 2019~Jul 25, 2019
Date of issued:	Jul 25, 2019
Test Result:	PASS

Applicant:	Kyocera Corporation
Manufacturer:	Kyocera Corporation
Factory:	Kyocera Corporation
Product name:	GSM/WCDMA/LTE Mobile Telephone
Trade Mark:	KYOCERA
Address:	2-1-1 Kagahara, Tsuzuki-ku, Yokohama-shi, Kanagawa, Japan, 224-8502
Issued By	BYD Precise Manufacture Co., Ltd.
Lab Location	No.3001, Baohe Road, Baolong, Longgang Shenzhen,518116 People's Republic of China

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1 REPORT ISSUED HISTORY

Version	Description	Issued Data
Rev. 01	Original issue	Jul 25, 2019

2 CERTIFICATION

PRODUCT:	GSM/WCDMA/LTE Mobile Telephone
MODEL NO.:	CB64
BRAND:	Kyocera Corporation
APPLICANT:	Kyocera Corporation
TEST SAMPLE:	ENGINEERING SAMPLE
IMEI Code:	356283100010109
HW Version:	CB64
SW Version:	msm8937_64-userdebug 9
TESTED:	Jul. 22~ Jul. 25, 2019
STANDARDS:	FCC Part 15 (Section 15.107&15.207)

The above equipment has been tested by **BYD Precise Manufacture Co., Ltd.,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , **DATE:** Jul. 25, 2019
(Xiaoyu Xu / Engineer)

TECHNICAL ACCEPTANCE : _____ , **DATE:** Jul. 25, 2019
Responsible for EMS (Zhaohui Feng / Manager)

APPROVED BY : _____ , **DATE:** Jul. 25, 2019
(Jie Yan / Director)

3 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15 (§15.107&15.207)			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
§ 15.107&15.207	AC Conducted Emission	PASS	Minimum passing margin is 15.40dB at 0.415MHz

3.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2 Ed 1.0.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

This lab's measurement uncertainty U_{Lab}, is low than U_{Cispr} , Table 1 – Values of U_{Cispr} of CISPR 16-4-2 Ed. 1.0, therefore compliance is deemed to occur if no measured disturbance exceeds the disturbance limit.

Measurement	Value
Conducted emissions	3.58 dB

4 GENERAL INFORMATION

4.1 GENERAL DESCRIPTION OF EUT

EUT	GSM/WCDMA/LTE Mobile Telephone
MODEL NO.	CB64
FCC ID	JOYCB64
POWER SUPPLY	120Vac, 60Hz&230Vac, 50Hz
EUT supports Radios application	PCS1900 WCDMA FDD Band II/IV LTE FDD Band 2/4
IMEI	356283100010109
ASSOCIATED DEVICES	Adapter, earphone

NOTE:

1. The models as identified below are identical to each other except of the model name and product name due to marketing requirement.
2. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

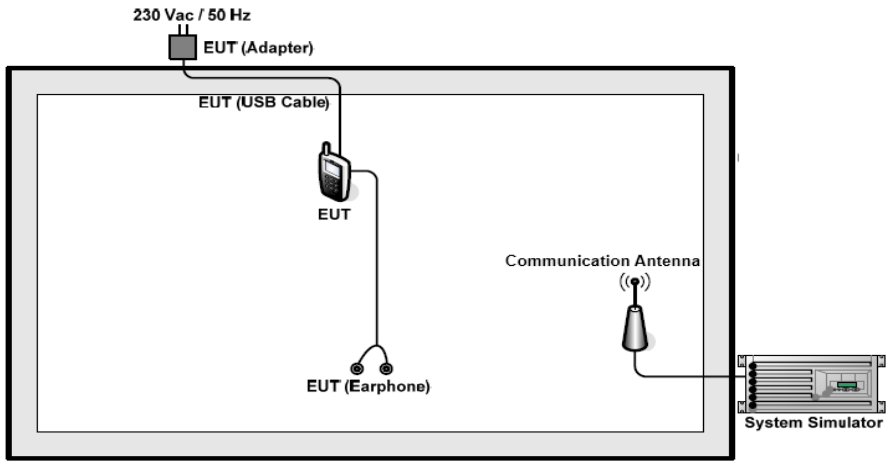
Accessory Information

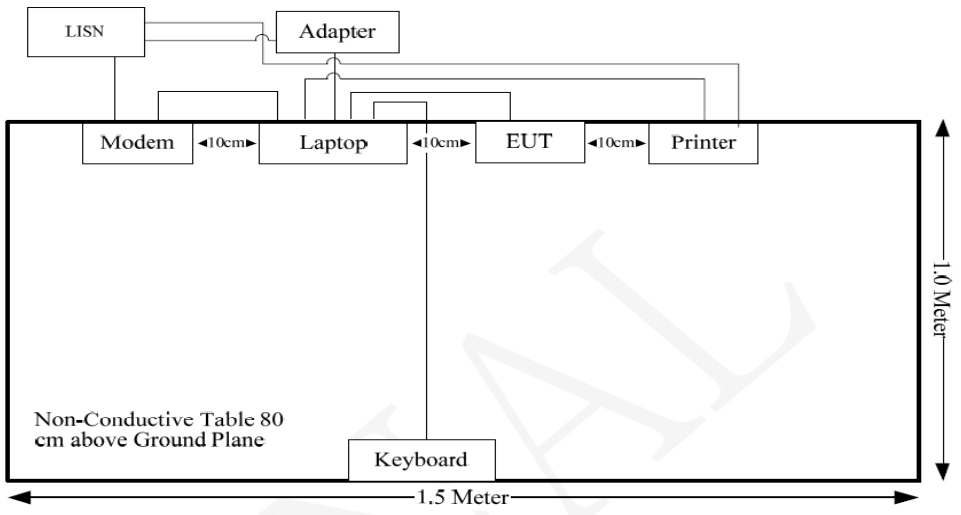
Accessory	Type	Serial #	Manufacturer	DUT NO.
Charger	KYCAV1	-	Kyocera	KYCAV1 1#
Headset	HSEJ03JY	-	XIAOMI	XIAOMI 2#
Laptop	Lenovo	R3032ZZT	Lenovo	PC 1#
65W AC adapter	ADLX65N0261	45N0497	Lenovo	Adapter 1#
Modem	Netgear 43	-	Netgear	Modem 1#
Printer	Canon LBP6230dn	NMQA115535	Canon	Printer 1#

4.2 DESCRIPTION OF TEST MODES

TEST ITEMS	FUNCTION TYPE
AC Conducted Emission	Mode1: LTE Band2 TX + earphone(2#) + Charging from adapter(1#)+WLan idle Mode2: WCDMA Band II idle + earphone(2#) + Charging from adapter(1#)+BT idle Mode3: PCS1900 TX+ earphone(2#) + Charging from adapter(1#)+GPS RX Mode4: Laptop+ printer+ Wan idle

4.2.1 CONFIGURATION OF SYSTEM UNDER TEST





4.2.2 Test Mode Applicability

EUT CONFIGURE MODE	APPLICABLE TO		DESCRIPTION
	PLC	CE	
1	√	√	**Mode1: LTE Band2 TX + earphone + Charging from adapter**

Where **PLC:** Power Line Conducted Emission

CE: Conducted Emission

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following Mode(s) was (were) selected for the final test as listed below.

AVAILABLE SUPPORTS RADIOS APPLICATION	TESTED SUPPORTS RADIOS APPLICATION
Power for a load with maximum current	Power for a load with maximum current

4.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, § 15.107& § 15.207
ANSI C63.4

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

4.4 Testing Location

Test Site	BYD Precise Manufacture Co., Ltd.
Test Site Location	No. 3001, Baohe Road, Baolong Longgang, Shenzhen, 518116, People's Republic of China
Post Code	518116
Telephone	+86-755 8489 8888 55501
Fax	+86-755 8964 3771

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:
• **A2LA (Certificate No. 4886.01)**
BYD Precise Manufacture Co., Ltd., Baolong Shenzhen Laboratory is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 4886.01.

• **FCC –Designation Number: CN1232**
BYD Precise Manufacture Co., Ltd., Baolong Shenzhen Laboratory has been recognized as an accredited testing laboratory.
Designation Number: CN1232.

4.6 CONDUCTED EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESU	100031	Jan. 20, 2020
LISN ROHDE & SCHWARZ	ENV 216	100049	Apr .08, 2020
Communication tester ROHDE & SCHWARZ	CMW 500	148351	Oct. 16, 2020
Software ROHDE & SCHWARZ	ESIB-K1 V1.2	N/A	N/A

NOTE: Calibration cycle 12 months.

4.6.3 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room was kept at least 80 centimeters from any grounded conducting surface.

b. Connect EUT to the power mains through a line impedance stabilization network.

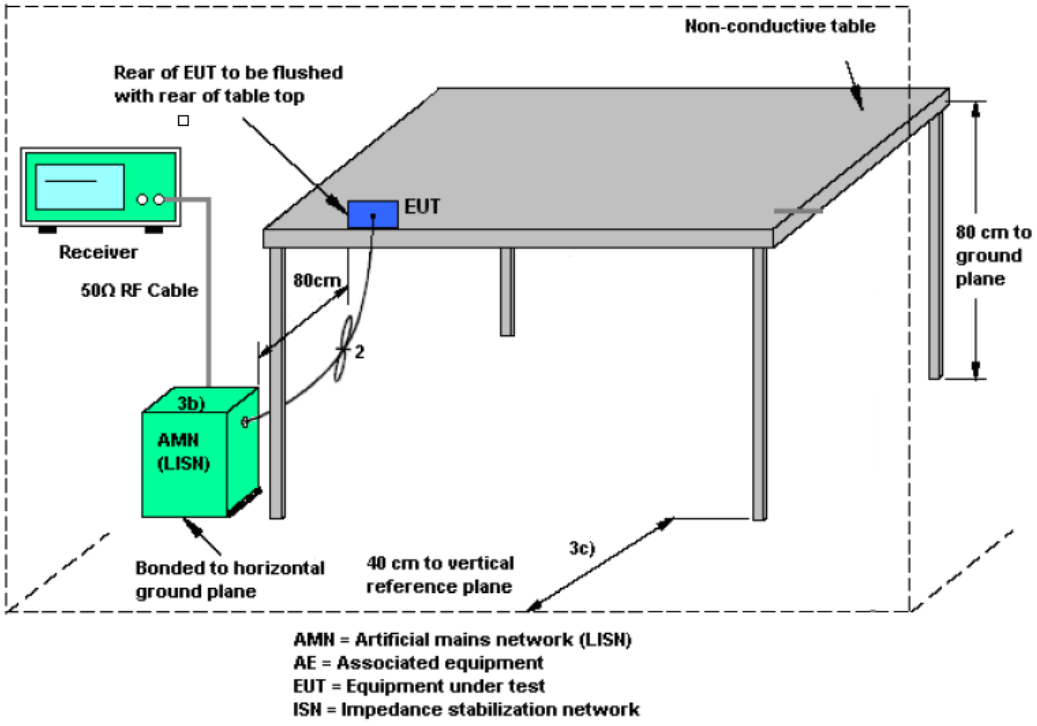
c. All the support units are connecting to the other LISN.

d. The LISN provides 50ohm coupling impedance for the measuring instrument.

e. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

f. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit – 20dB) was not recorded.

4.6.4 TEST SETUP



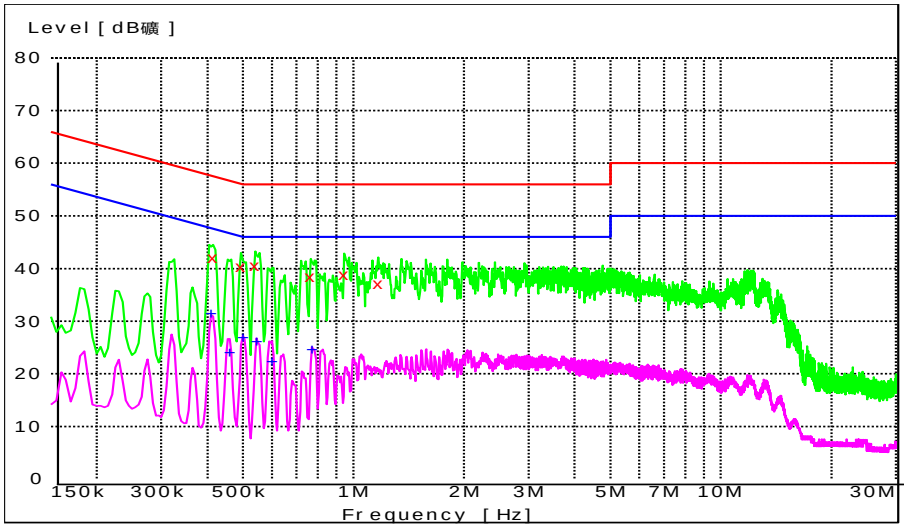
For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.6.5 EUT OPERATING CONDITIONS

a. Connect the charger and headset with the EUT.
b. The EUT was plugged into the power strip.
c. Connecting the EUT with CMW 500

4.6.6 TEST RESULTS

Test mode	Mode 1	Test voltage	120Vac/60Hz
Phase	L	Environmental conditions	26deg. C, 56%RH, 1006hPa
Tested by	Xiaoyu Xu		
Result	PASS		
Function Type	LTE Band2 TX +earphone(2#) +Charging from adapter(1#) (worst case)		



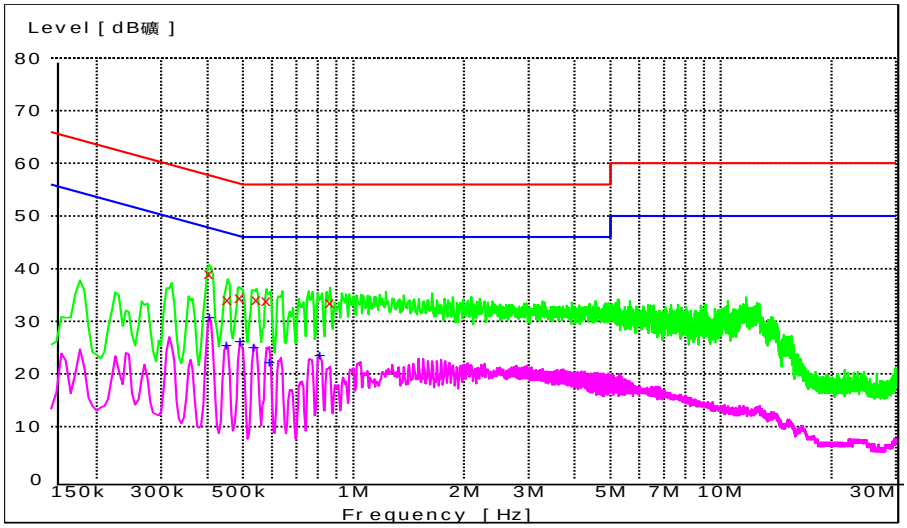
AV

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.410000	31.30	9.70	47.60	16.40
0.460000	24.00	9.60	46.70	22.70
0.500000	26.80	9.60	46.00	19.20
0.545000	26.10	9.80	46.00	19.90
0.600000	22.40	9.70	46.00	23.60
0.770000	24.70	9.70	46.00	21.30

QP

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.415000	42.10	9.70	57.50	15.40
0.495000	40.40	9.60	56.10	15.60
0.540000	40.50	9.80	56.00	15.50
0.765000	38.50	9.60	56.00	17.50
0.945000	38.80	9.60	56.00	17.20
1.170000	37.00	9.70	56.00	19.00

Test mode	Mode 1	Test voltage	120Vac/60Hz
Phase	N	Environmental conditions	26deg. C, 56%RH, 1006hPa
Tested by	Xiaoyu Xu		
Result	PASS		
Function Type	LTE Band2 TX +earphone(2#) +Charging from adapter(1#) (worst case)		



AV

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.405000	30.70	9.70	47.80	17.10
0.450000	25.40	9.70	46.90	21.40
0.490000	26.00	9.60	46.20	20.20
0.535000	24.90	9.70	46.00	21.10
0.590000	22.20	9.70	46.00	23.80
0.810000	23.40	9.70	46.00	22.60

QP

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.405000	39.10	9.70	57.80	18.60
0.455000	34.20	9.70	56.80	22.60
0.490000	34.50	9.60	56.20	21.70
0.545000	34.20	9.80	56.00	21.80
0.580000	33.90	9.70	56.00	22.10
0.865000	33.60	9.70	56.00	22.40

4.6.7 TEST SETUP PHOTOES

Reference atachment: Test Setup Photos_3

PPENDIX - INFORMATION ON THE TESTING LABORATORIES

We, BYD Precise Manufacture Co., Ltd., were founded in 2007 to provide our best service in EMC, Radio consultation. Our laboratories are accredited by the following accreditation bodies according to ISO/IEC 17025 (2005).

USA	A2LA Certificate No.: 4886.01

Copies of accreditation certificates could be inquired from our office. If you have any comments, please feel free to contact us at the following:

EMC / RF / Lab:
Tel: +86-755 8489 8888 55501
Fax: +86-755 8964 3771

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