CBSD-EUD Test Report

Report No.:	RFBFJZ-WTW-P21050403C-20
FCC ID:	V65C6930
Test Model:	C6930
Received Date:	Mar. 30, 2023
Test Date:	Apr. 20, 2023
Issued Date:	May 02, 2023
Applicant:	Kyocera Corporation c/o Kyocera International, Inc.
Address:	8611 Balboa Avenue, San Diego, CA 92123
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration/ Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RFBFJZ-WTW-P21050403C-20	Original release	May 02, 2023

1 Certificate of Conformity

Product:	SmartPhone
Brand:	Kyocera
Test Model:	C6930
Sample Status:	Identical Prototype
Applicant:	Kyocera Corporation c/o Kyocera International, Inc.
Test Date:	Apr. 20, 2023
Standards:	FCC Part 96.47

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, 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 RF characteristics under the conditions specified in this report.

Prepared by : Pettie Chen , **Date:** May 02, 2023

Pettie Chen / Senior Specialist

Approved by : Jeremy Lin , **Date:** May 02, 2023

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard : FCC Part 96.47			
FCC Clause	Test Item	Result	Remarks
96.47(a)(1)	End User Device additional requirements	Pass	Meet the requirement

2.1 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	SmartPhone
Brand	Kyocera
Test Model	C6930
Status of EUT	Identical Prototype
Accessory Device	3.87Vdc from battery 5Vdc / 9Vdc / 12Vdc from adapter
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT contains following accessory devices.

Battery	
Brand	Kyocera
Model	SCP-75LBPS
Rating	3.87 V typ / 4500 mAh/17.5 Wh typ

Adapter	
Brand	Kyocera
Model	SCP-49ADT
Input Power	AC 100-240V, 50/60Hz 0.4A
Output Power	DC 5.0V, 1.8A / 9.0V, 1.8A / 12.0V, 1.2A

USB Cable	
Brand	Kyocera
Model	SCP-24SDC
Signal Line	1m shielded Type A to Type C USB cable

2. EUT integrated antenna.

Band	Freq. Range (MHz)	Gain (dBi)
n48	3550 ~ 3700	-0.4 (Tx2)

3. This report is for 5GNR n48 test.

4 Measurement

4.1 End User Device additional requirements

FCC Part 96.47

(a) End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.

(1) An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

4.2 Test Procedure

Following test procedure can be done by WINNF-TS-0122 CBRS CBSD Test Specification, use the certifited CBSD(FCC ID: P27-SCE5164-B48) as CBSD device to show compliance with FCC Part 96.47 requirements for End User Device(EUD):

Test #1:

a) Setup WINNF.PT.C.HBT.1 with 3620 ~ 3630 MHz and MaxEIRP at 10 dBm/MHz.
b) Enable CBSD service from EPC management.
c) **Check** EUD Tx Frequency and connection successful.
d) Disable AP service from EPC management.
e) **Check** if EUT stop transmission within 10s.

Test #2:

a) Setup WINNF.PT.C.HBT.1 with 3595 ~ 3605 MHz and MaxEIRP at 2.82 dBm/MHz.
b) Enable CBSD service from EPC management.
c) **Check** EUD Tx Frequency and connection successful.
d) Change power to -2.42 dBm/MHz.
e) **Check** EUD Tx output power.
f) Disable AP service from EPC management.
g) **Check** if EUT stop transmission within 10s.

Note: Test #1 and #2 to show compliance with the hadshake testing under Part 96.

4.3 Test Environment

Test Condition

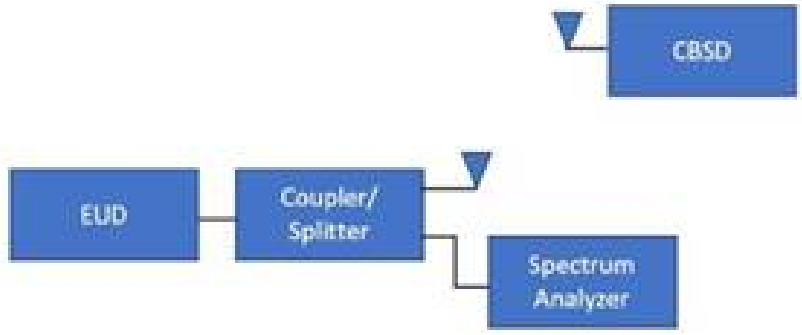
Test Item	Environmental Conditions	Input Power	Tested By
End User Device additional requirements	25deg. C, 70%RH	120Vac, 60Hz	Matthew Yang

4.4 Test Equipment

Description & Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
CBSD Sercomm	SCE5164 (FCC ID: P27-SCE5164-B48)	2208DR6000016	NA	NA
Laptop DELL	P137G	P137G001	NA	NA
Spectrum Analyzer KEYSIGHT	MXA	E2-010824	Dec. 26, 2022	Dec. 25, 2023
2WAY DIV WOKEN	0.5-8GHz 2Way SMA	DCMACMW1E4	Jan. 10, 2023	Jan. 09, 2024

NOTE: 1. The test was performed in WM OVEN 1 Test Room
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Apr. 20, 2023

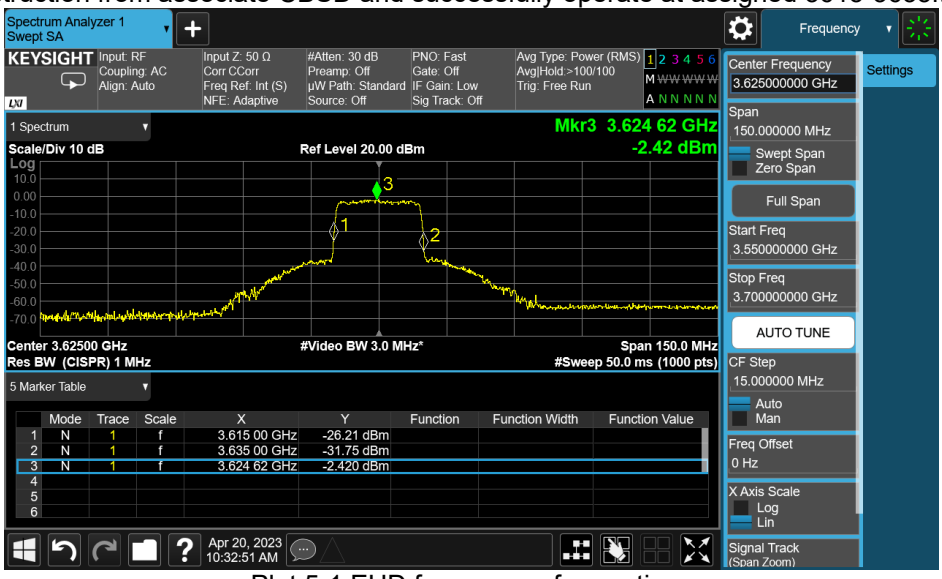
4.5 Test Setup



NOTE: The CBSD device is certified CBSD(FCC ID: P27-SCE5164-B48). Where the CBSD device connection with EUD is by radiated method. The EUD device connection with Spectrum Analyzer is by conducted method.

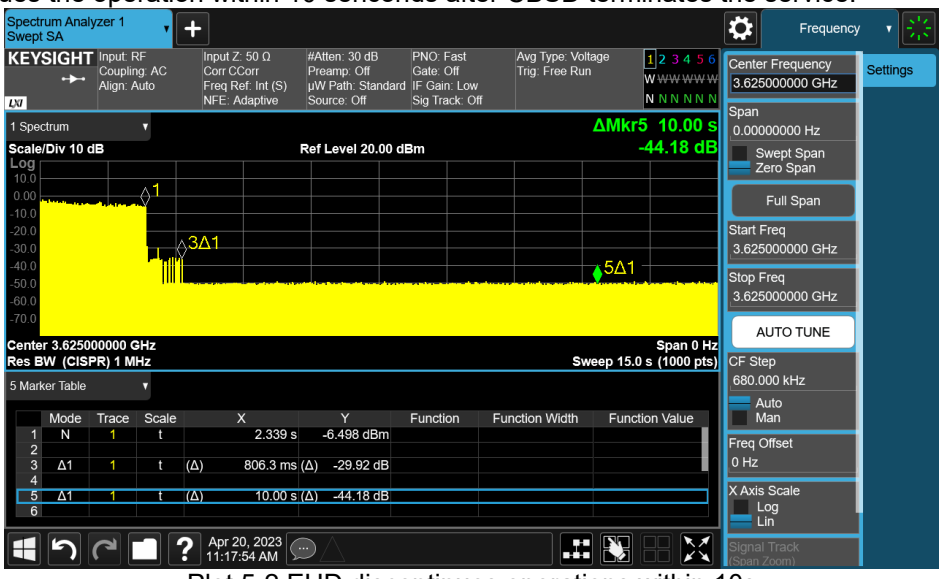
4.6 Test Result

Step Test #1-(c)
EUD follow instruction from associate CBSD and successfully operate at assigned 3615-3635MHz channel.



Plot 5-1 EUD frequency of operations

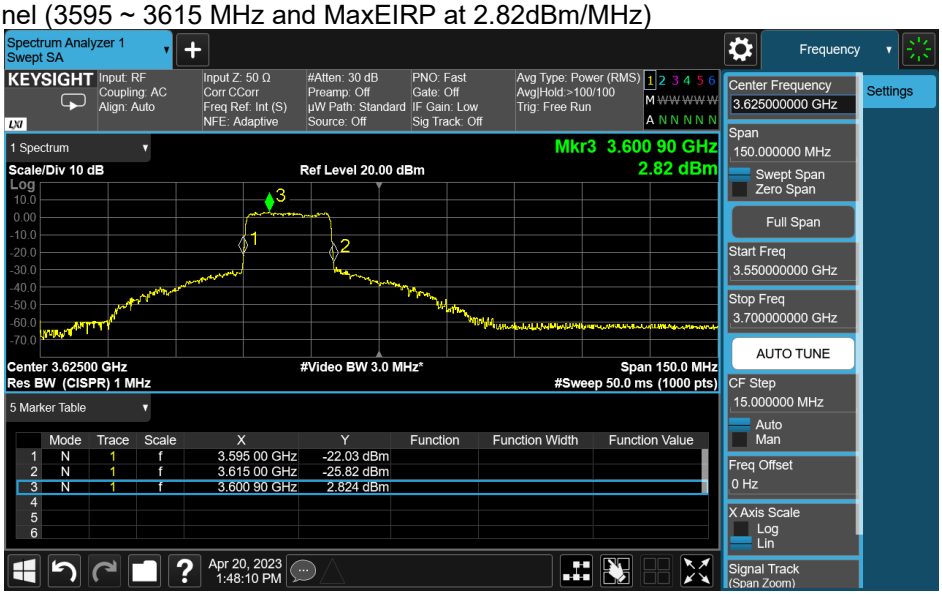
Step Test #1(e)
EUD discontinues the operation within 10 senconds after CBSD terminates the service:



Plot 5-2 EUD discontinues operations within 10s

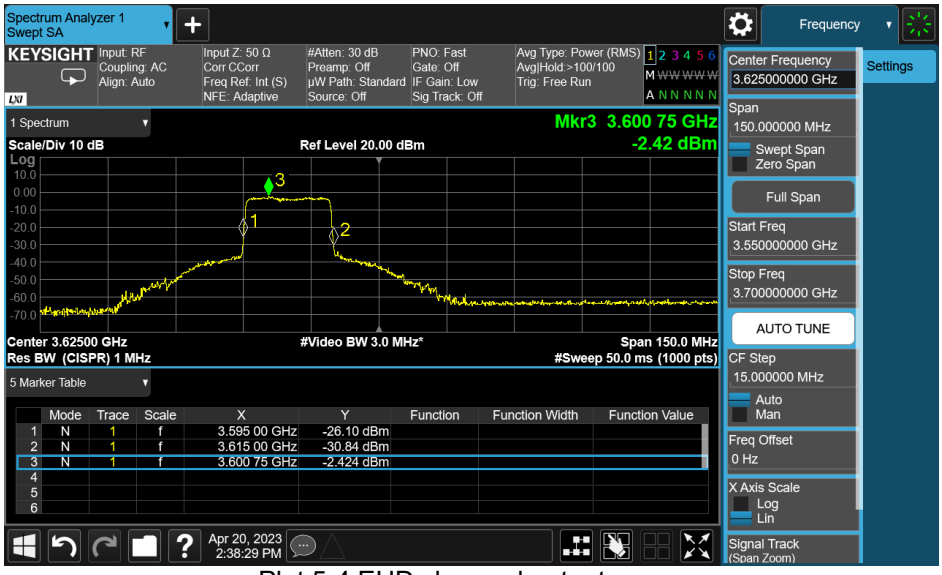
Note :
Marker 1: CBSD sends instructions to discontinues operations.
Marker 3: EUD discontinues operation.
Marker 5: 10 seconds elapsed time from CBSD sending instructions to EUD.

Test #2(c)
following plots demonstrate that EUD response to the associated CBSD instruction and operate at a new assigned channel (3595 ~ 3615 MHz and MaxEIRP at 2.82dBm/MHz)



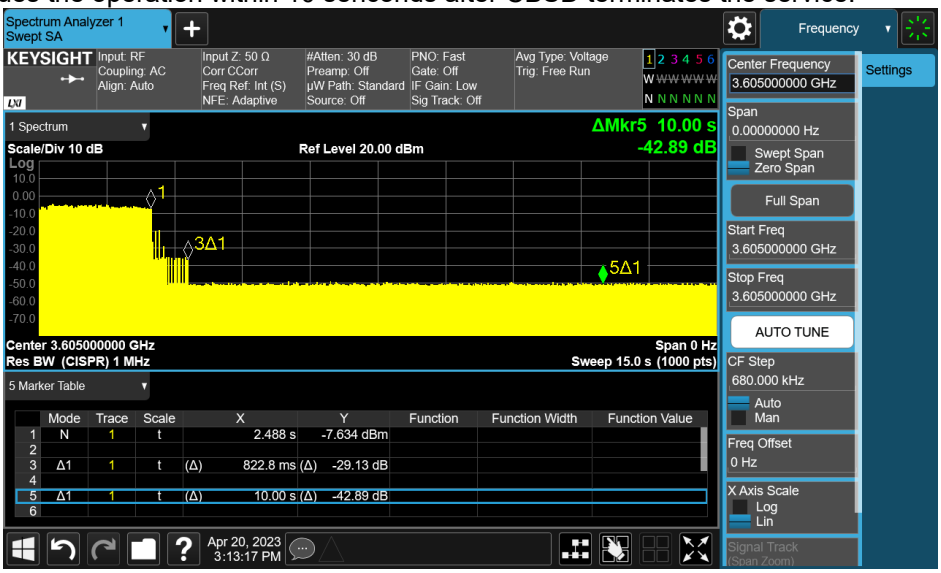
Plot 5-3 EUD frequency of operations

Test #2(e)
following plot demonstrates that EUD response to the associated CBSD power reduce instruction and reduce the power for 5 dB.



Plot 5-4 EUD changed output power

Step Test #2(g)
EUD discontinues the operation within 10 senconds after CBSD terminates the service:



Plot 5-5 EUD discontinues operations within 10s.

Note :
Marker 1: CBSD sends instructions to discontinues operations.
Marker 3: EUD discontinues operation.
Marker 5: 10 seconds elapsed time from CBSD sending instructions to EUD.

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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