CBSD-EUD Test Report

Report No.:	RFBFJZ-WTW-P22110126
FCC ID:	V65E7200
Test Model:	E7200
Received Date:	Dec. 07, 2022
Test Date:	Dec. 07, 2022 ~ Mar. 24, 2023
Issued Date:	Apr. 10, 2023
Applicant:	Kyocera Corporation % 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

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBFJZ-WTW-P22110126	Original release	Apr. 10, 2023

1 Certificate of Conformity

Product:	Smart Phone
Brand:	Kyocera
Test Model:	E7200
Sample Status:	Identical prototype
Applicant:	Kyocera Corporation % Kyocera International, Inc.
Test Date:	Dec. 07, 2022
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 : Polly Chien , **Date:** Apr. 10, 2023

Polly Chien / Specialist

Approved by : Jeremy Lin , **Date:** Apr. 10, 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	Smart Phone
Brand	Kyocera
Test Model	E7200
Status of EUT	Identical prototype
Accessory Device	Battery and Type A to Type C USB cable
Data Cable Supplied	1m shielded Type A to Type C USB cable w/o core

Note:

1. This report is for LTE and 5GNR CBSD test.
2. The EUT uses following accessories.

Battery		
Brand	Model	Specification
Kyocera	SCP-76LBPS	Power Rating : 3.87Vdc, typ 4270mAh, typ. 16.6Wh
USB Type A to USB type C cable		
Brand	Model	Specification
KYOCERA	SCP-24 SDC	Signal Line : 1m shielded Type A to Type C USB

3. The EUT uses following support unit only.

Adapter (Support unit)		
Brand	Model	Specification
Kyocera	SCP-53ADT	AC Input: 100-240 Vac, 50/60 Hz, 0.6A DC Output: 5Vdc, 3A; 9Vdc, 3A; 15Vdc, 1.8A; 20Vdc, 1.35A

4. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

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: P27P208) and 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 3615 ~ 3635 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 ~ 3615 MHz and MaxEIRP at 15 dBm/MHz.
b) Enable CBSD service from EPC management.
c) Check EUD Tx Frequency and connection successful.
d) Change power to 10 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

LTE Band 48

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until
CBSD Sercomm	P208-TP (FCCID:P27P208)	1801BVV000034	NA	NA
Laptop DELL	Inspiron 15 3000	D67MYN2	NA	NA
Spectrum Analyzer KEYSIGHT	MXA	E2-010822	Dec. 21, 2021	Dec. 20, 2022
Horn Antenna RFSPIN	DRH18-E	210101A18E	Nov. 13, 2022	Nov. 12, 2023
Horn Antenna RFSPIN	DRH18-E	210103A18E	Nov. 13, 2022	Nov. 12, 2023
RF Coaxial Cable EMCI	EMC104-SM-SM-1000	210101	Jan. 17, 2022	Jan. 16, 2023
RF Coaxial Cable EMCI	EMC104-SM-SM-1000	210102	Jan. 17, 2022	Jan. 16, 2023
2WAY DIV WOKEN	2-18GHz 2Way SMA	COM412W5E2	Jan. 12, 2022	Jan. 11, 2023

NOTE: 1. The test was performed in OVEN 3 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: Dec. 07, 2022

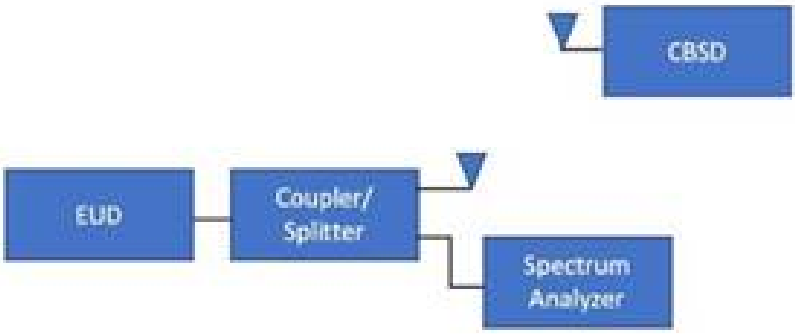
5GNR n48

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until
CBSD Sercomm	SCE5164 (FCCID: P27-SCE5164-B48)	2208DR6000016	NA	NA
Laptop DELL	P137G	P137G001	NA	NA
Spectrum Analyzer ROHDE & SCHWARZ	FSV3044	101105	Feb. 22, 2023	Feb. 21, 2024
Horn Antenna RFSPIN	DRH18-E	210101A18E	Nov. 13, 2022	Nov. 12, 2023
Horn Antenna RFSPIN	DRH18-E	210103A18E	Nov. 13, 2022	Nov. 12, 2023
RF Coaxial Cable EMCI	EMC104-SM-SM-1000	210101	Jan. 16, 2023	Jan. 15, 2024
RF Coaxial Cable EMCI	EMC104-SM-SM-1000	210102	Jan. 16, 2023	Jan. 15, 2024
2WAY DIV WOKEN	2-18GHz 2Way SMA	COM412W5E2	Jan. 17, 2023	Jan. 16, 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: Mar. 24, 2023

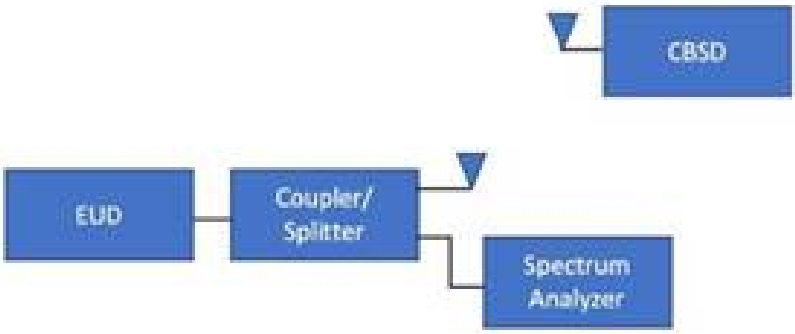
4.5 Test Setup

LTE Band 48



NOTE: The CBSD device is certified CBSD(FCC ID: P27P208). Where the CBSD device connection with EUD is by radiated method. The EUD device connection with Spectrum Analyzer is by conducted method.

5GNR n48

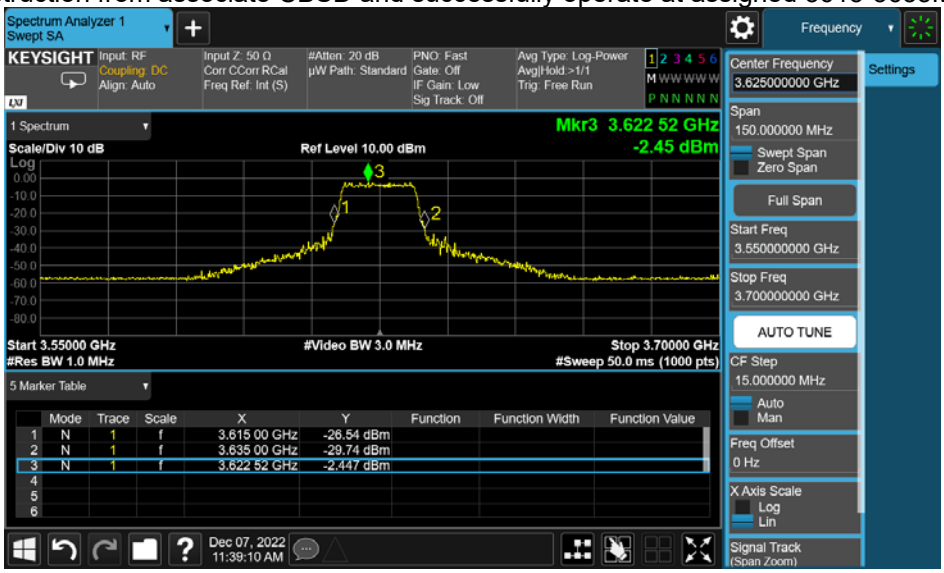


NOTE: The CBSD device is certified CBSD(FCC ID: P27-SCE5164-B48). Where the CBSD device connection with EUD is by radiated method. The EUD device connection with Spectrum Analyzer is by conducted method.

4.6 Test Result

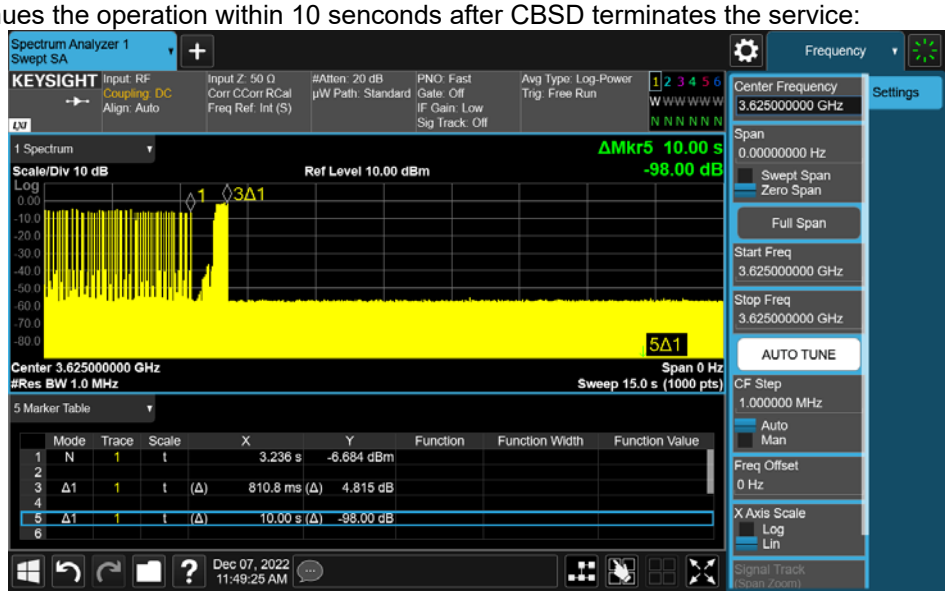
LTE Band 48

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

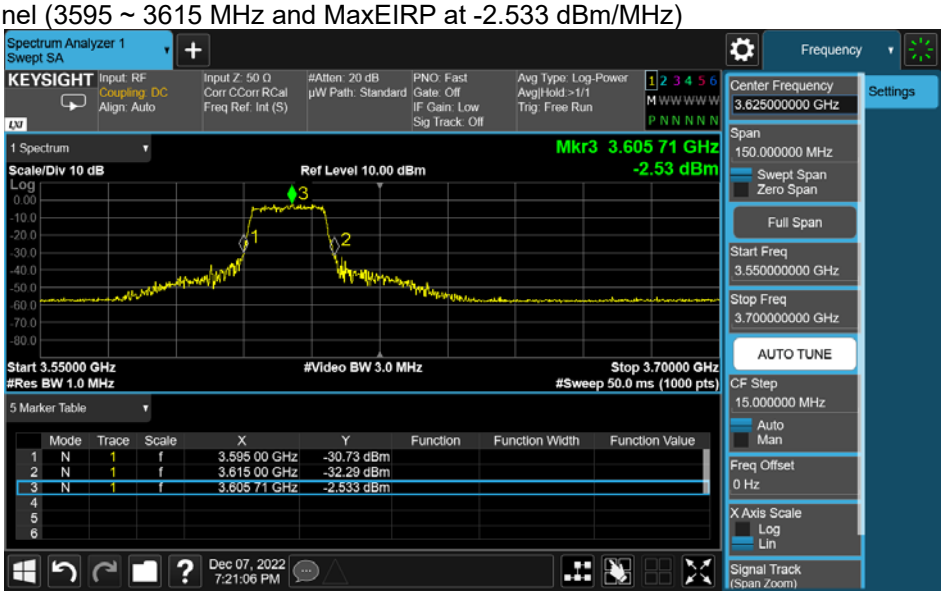
Step Test #1(e)
EUD discontinues the operation within 10 senconds after CBSD terminates the service:



Plot 5-2 EUD discontinues operations within 10s

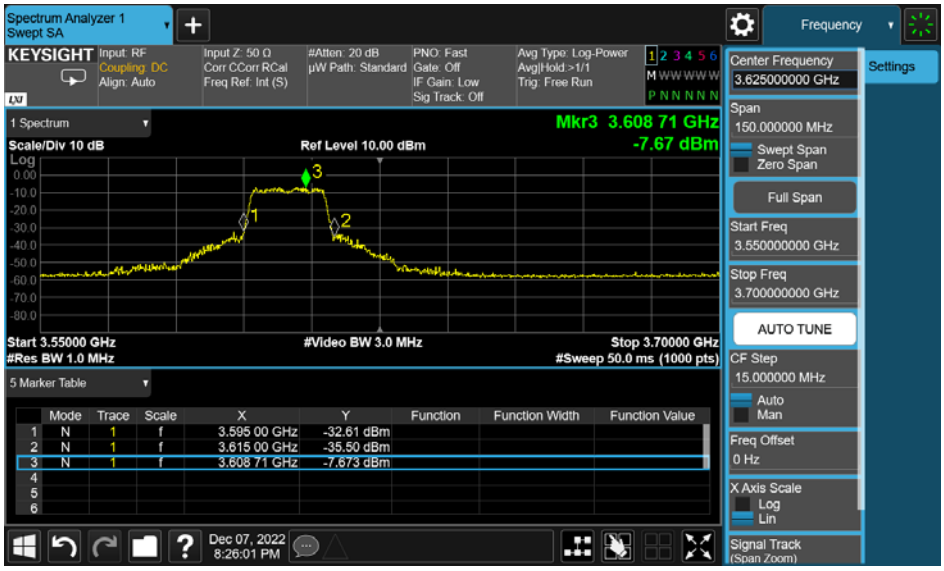
Note :
Marker 1: CBSD sends instructions to discontinues operations.
Marker 2: EUD discontinues operation.
Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUD.

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 -2.533 dBm/MHz)



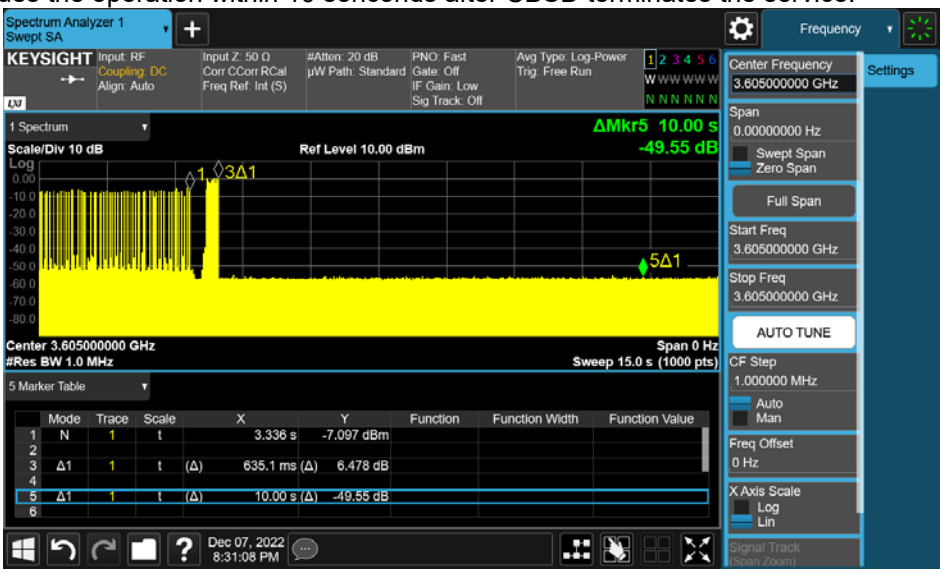
Plot 5-3 EUD frequency of operations

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:

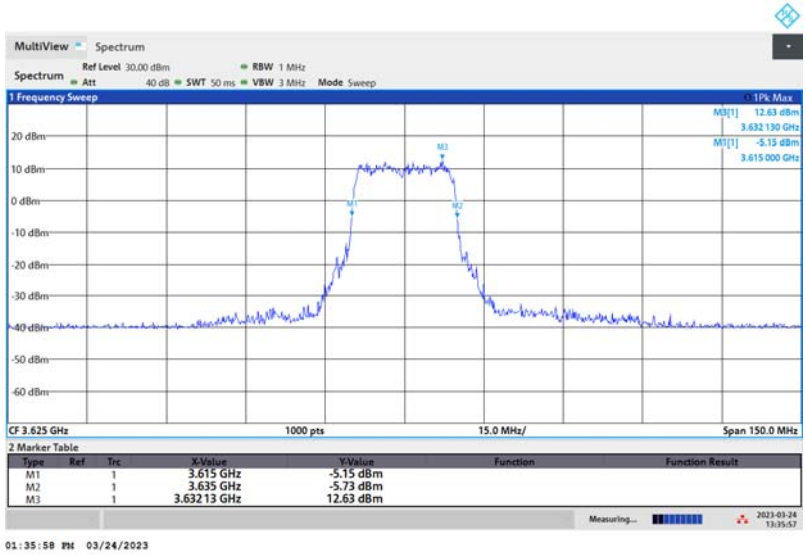


Plot 5-5 EUD discontinues operations within 10s.

Note :
Marker 1: CBSD sends instructions to discontinues operations.
Marker 2: EUD discontinues operation.
Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUD.

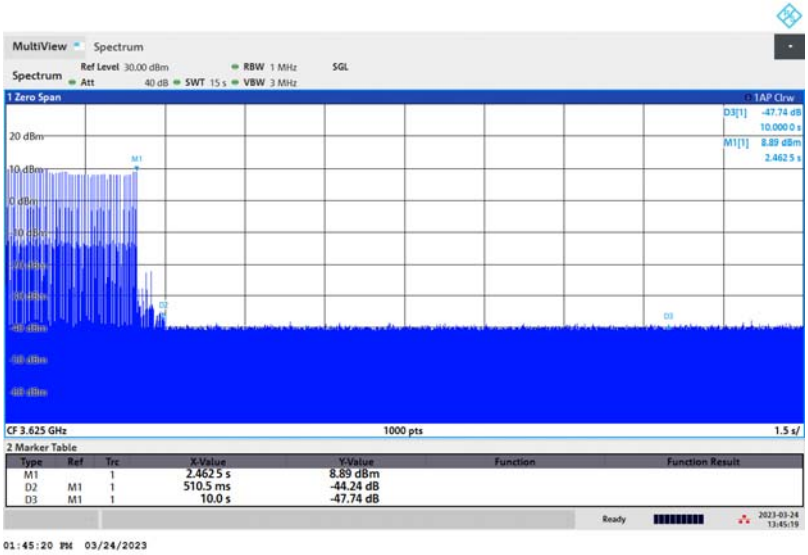
5GNR n48

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

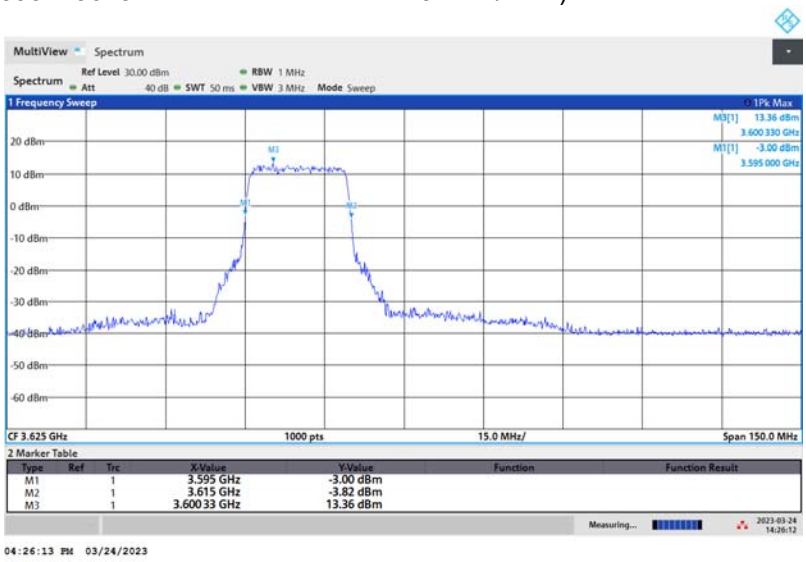
Step Test #1(e)
EUD discontinues the operation within 10 senconds after CBSD terminates the service:



Plot 5-2 EUD discontinues operations within 10s

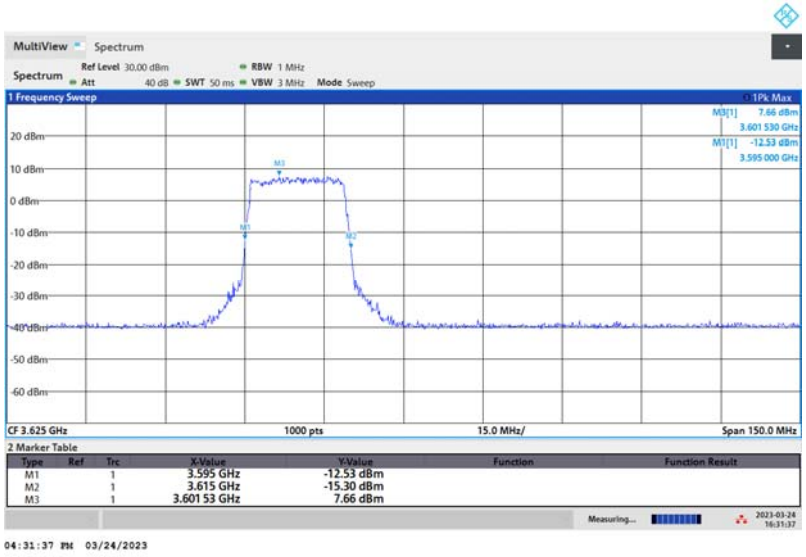
Note :
Marker 1: CBSD sends instructions to discontinues operations.
Marker 2: EUD discontinues operation.
Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUD.

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 15 dBm/MHz)



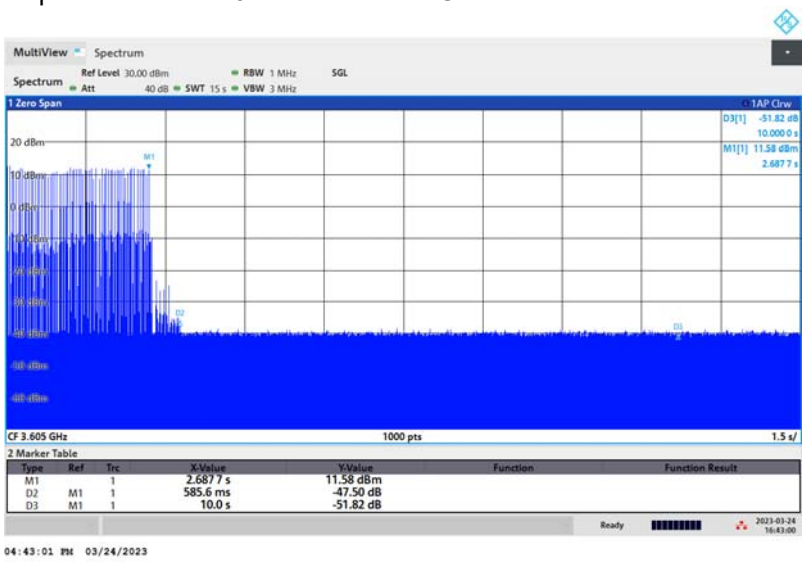
Plot 5-3 EUD frequency of operations

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 2: EUD discontinues operation.
Marker 3: 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 FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: http://ee.bureauveritas.com.tw

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

--- END ---