

CBSD-EUD Test Report

Report No.: RFCDVB-WTW-P22080669A-2

FCC ID: QYLEM9190K

Test Model: EM9190

Received Date: Aug. 08, 2023

Test Date: Aug. 29, 2023

Issued Date: Sep. 06, 2023

Applicant: Getac Technology Corporation.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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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
RFCDVB-WTW-P22080669A-2	Original release	Sep. 06, 2023

1 Certificate of Conformity

Product: Wireless Module

Test Model: EM9190

Sample Status: Identical Prototype


Applicant: Getac Technology Corporation.

Test Date: Aug. 29, 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 : , **Date:** Sep. 06, 2023
Polly Chien / Specialist

Approved by : , **Date:** Sep. 06, 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	Wireless Module
Test Model	EM9190
Status of EUT	Identical Prototype
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. This report is for 5GNR CBSD test.
2. The EUT is authorized for use in specific End-product. The model of the K120 was chosen for final test.

Product	Brand	Model	Description
Tablet	Getac	K120	For marketing purpose
		K120G2	
		K120Y (Y= 10, Y can be 0-9, a-z, A-Z, "-", "_" or blank for marketing purpose)	
		K120G2-R	

3. The End-product contains following accessory devices.

Product	Brand	Model	Description
Adapter 1	Getac	MTA190474W4	I/P: 100-240Vac, 1.6A, 50-60Hz O/P: 19.0Vdc, 4.74A (90.0W)
Adapter 2	Chicony	A15-090P1A	I/P: 100-240Vac, 1.2A, 50-60Hz O/P: 19.0Vdc, 4.74A (90.0W)
Battery 1	Getac	BP3S1P2100S-01	11.1Vdc, 2040mAh, 24Wh
Battery 2	Getac	BP4S1P3450P-01	14.4Vdc, 3300mAh, 48Wh
Touch Pen	Getac	340142000064	-
Dock	Getac	K120 Keyboard Dock	-

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 certified 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 0.52 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 5.11 dBm/MHz.
- b) Enable CBSD service from EPC management.
- c) Check EUD Tx Frequency and connection successful.
- d) Change power to 0.56 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 handshake testing under Part 96.

4.3 Test Environment

Test Condition

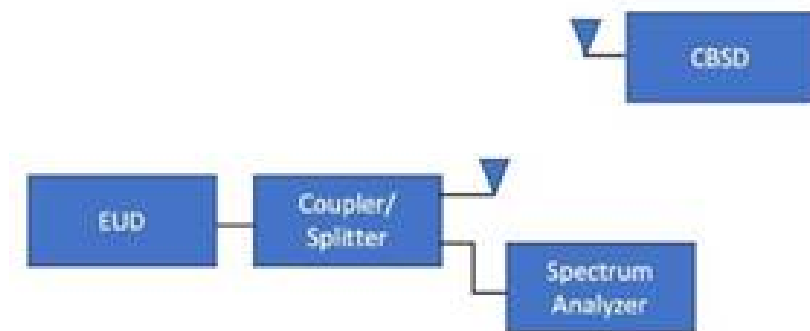
Test Item	Environmental Conditions	Input Power	Tested By
End User Device additional requirements	25deg. C, 70%RH	120Vac, 60Hz	Matthew Yang

4.4 Test Equipment

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until
CBSD Sercomm	SCE5164 (FCCID: P27-SCE5164-B48)	2208DR6000016	NA	NA
Laptop DELL	Inspiron 15 3000	D67MYN2	NA	NA
Spectrum Analyzer KEYSIGHT	PXA N9030A	E2-010473	Jul. 25, 2023	Jul. 24, 2024
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: Aug. 29, 2023

4.5 Test Setup

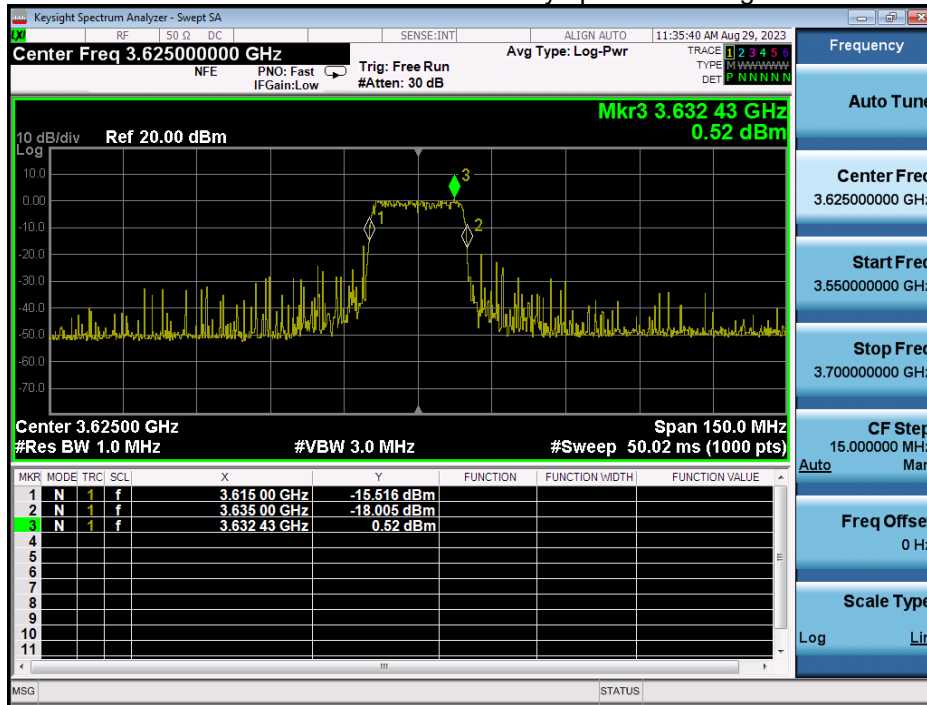


NOTE: The CBSD device is certified CBSD(FCC ID: P27-SCE5164-B48). Where the CBSD device connection with EUD is by radiated method. The EUD device connection with Spectrum Analyzer is by conducted method.

4.6 Test Result

Step Test #1-(c)

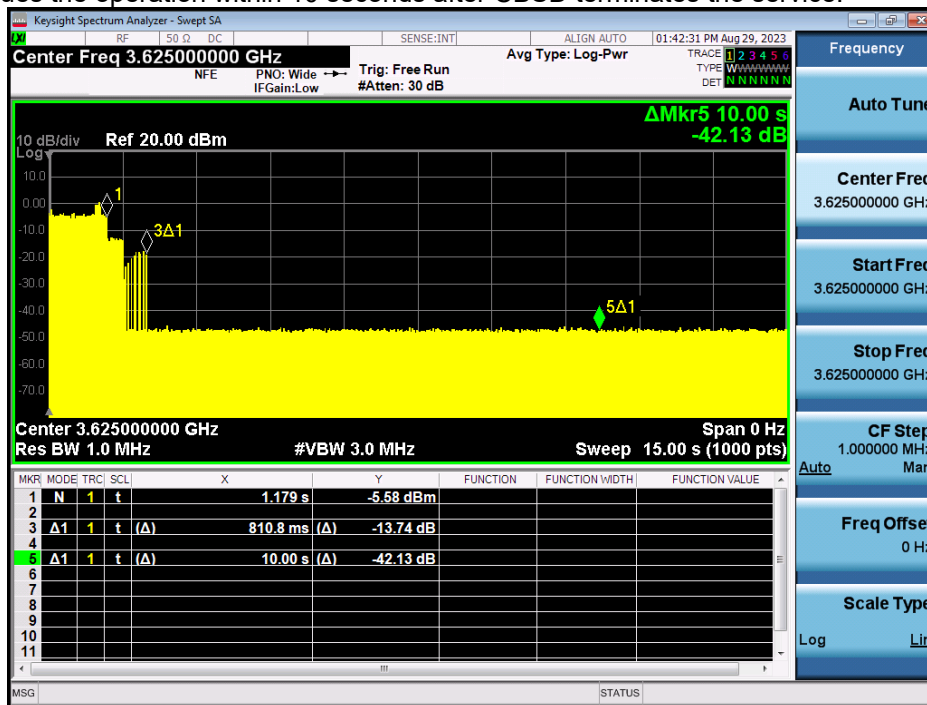
EUD follow instruction from associate CBSD and successfully operate at assigned 3615-3635 MHz channel.



Plot 5-1 EUD frequency of operations

Step Test #1(e)

EUD discontinues the operation within 10 seconds after CBSD terminates the service:



Plot 5-2 EUD discontinues operations within 10s

Note:

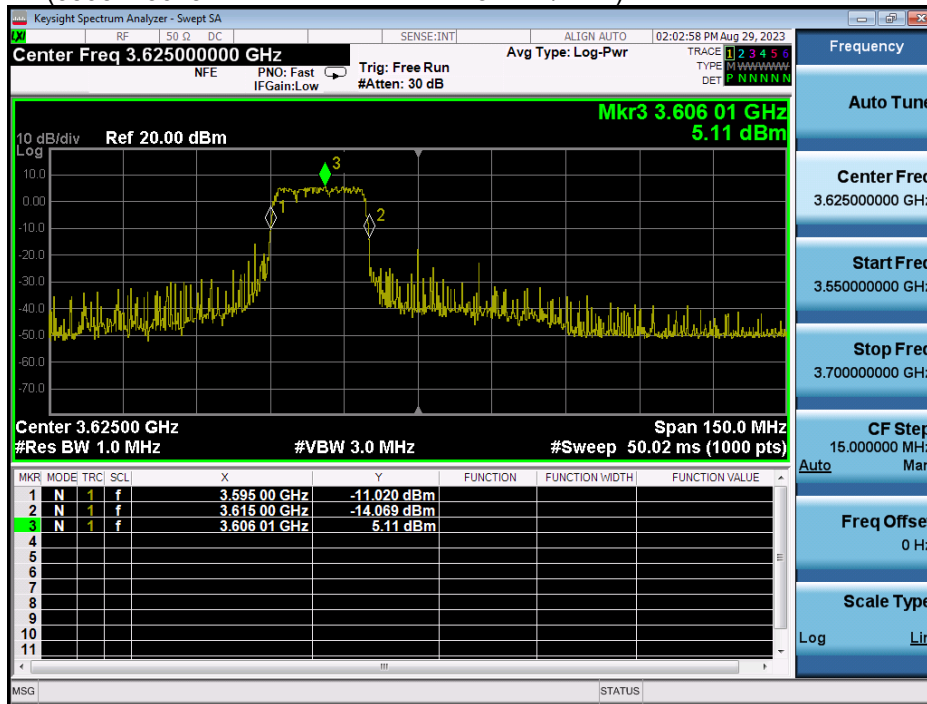
Marker 1: CBSD sends instructions to discontinues operations.

Marker 2: EUD discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUD.

Test #2(c)

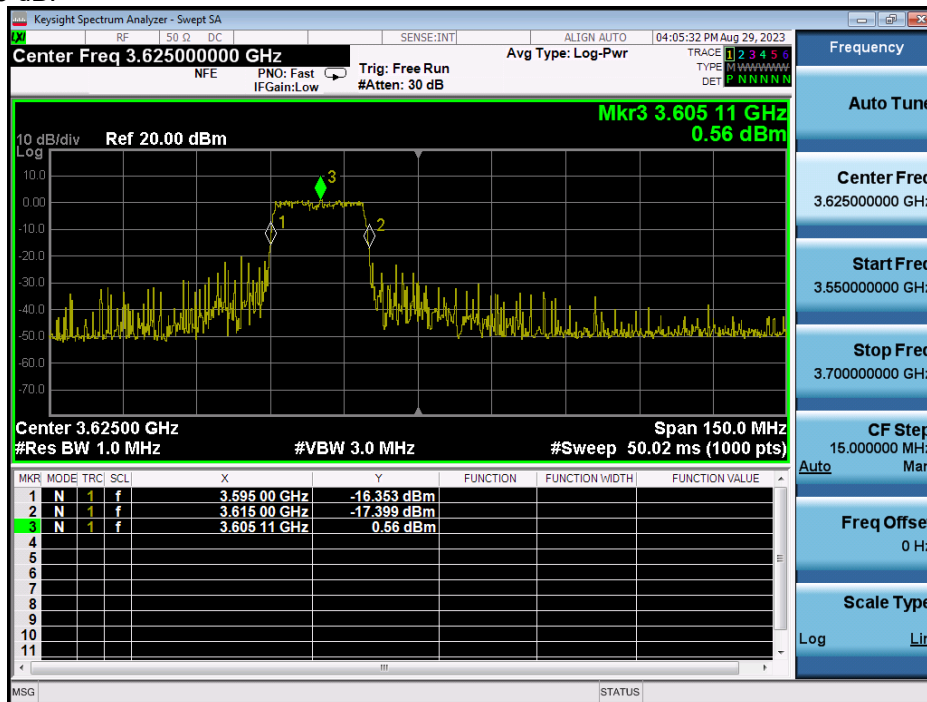
following plots demonstrate that EUD response to the associated CBSD instruction and operate at a new assigned channel (3595 ~ 3615 MHz and MaxEIRP at 5 dBm/MHz)



Plot 5-3 EUD frequency of operations

Test #2(e)

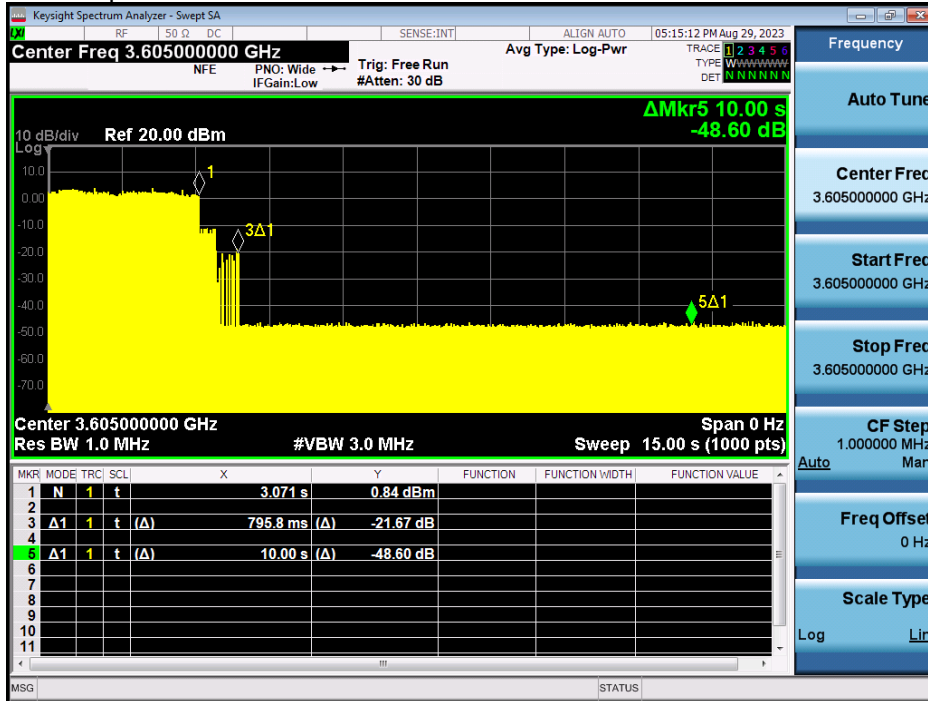
following plot demonstrates that EUD response to the associated CBSD power reduce instruction and reduce the power for 5 dB.



Plot 5-4 EUD changed output power

Step Test #2(g)

EUD discontinues the operation within 10 seconds 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:

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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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