

RANIX Inc.

PAG check List

Company name: RANIX Inc.

Address: RANIX Bldg. 25, Eonju-ro 135-gil, Gangnam-gu, Seoul, 06053, Korea

Product Name: AI Edge Radar

FCC ID: 2BMJL-RMR602A

Model(s): RMR602A

a. Applicants for certification under §15.255(c)(2), in addition to a show of compliance to the specified limits, shall explain how conducted output power was determined and demonstrate compliance to the limits.

- Not applicable.

b. Applicants for certification to operate in the 60.0-61.5 GHz ISM band under §15.255(c)(2)(v), in addition to showing compliance to the stated technical requirements, shall also demonstrate that the fundamental emission bandwidth is entirely contained within the band.

- Not applicable.

c. For radar devices intended for operation in the 60-64 GHz band segment and for use onboard unmanned aircraft per §15.255(b)(3), in addition to a show of compliance to the output power limit, data showing that the fundamental emission bandwidth is contained within the designated band segment and time domain data demonstrating compliance to the off-time requirement shall be provided.

Additionally, an explanation must be provided as to how the altitude restriction will be realized. Note that there is also a similar altitude restriction in the FAA rules at §107.51 within Title 14 of the Code of Federal Regulations (CFR).

- Not applicable.

d. Applications for radar operation in the 57.0-59.4 GHz band segment under the §15.255(c)(2)(i) rule provision, in addition to showing compliance to the stated limits, shall also provide data demonstrating that the fundamental emission bandwidth is entirely contained within the designated band segment, and a statement as to whether usage will be limited to indoor or outdoor operations and how such limitations will be ensured.

- Not applicable.

RANIX Inc.

e. For radar devices intended to operate in the 57.0-61.56 GHz band segment under the provisions of §15.255(c)(2)(ii), in addition to a show of compliance to the applicable limits, provide data showing that the fundamental emission bandwidth is fully contained within the authorized band segment. Where appropriate ($3 \text{ dBm} < \text{EIRP} \leq 20 \text{ dBm}$), time domain data showing compliance to the off-time requirement shall be provided.

- Not applicable.

f. Radar devices intended for operation over the 57.0-64.0 GHz band segment under the requirements of §15.255(c)(2)(iii), in addition to showing compliance with the applicable limits, shall also provide data demonstrating that the fundamental emission bandwidth is fully contained within the designated band segment and time domain data demonstrating that the stated off-time requirement is satisfied under all operational conditions.

- Please see the next page.

g. If the radar is to be certified for operation over the 57.0-64.0 GHz band segment under the auspices of §15.255(c)(2)(iii)(A), provide data showing that the fundamental emission bandwidth is wholly contained within the authorized band segment and time domain data demonstrating compliance to the associated off-time requirement, in addition of a show of compliance to the relevant limits.

- Please see the next page.

8. Occupied Bandwidth

8.1 Test Requirement

§ 2.1049 Measurements required: Occupied bandwidth.

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable.

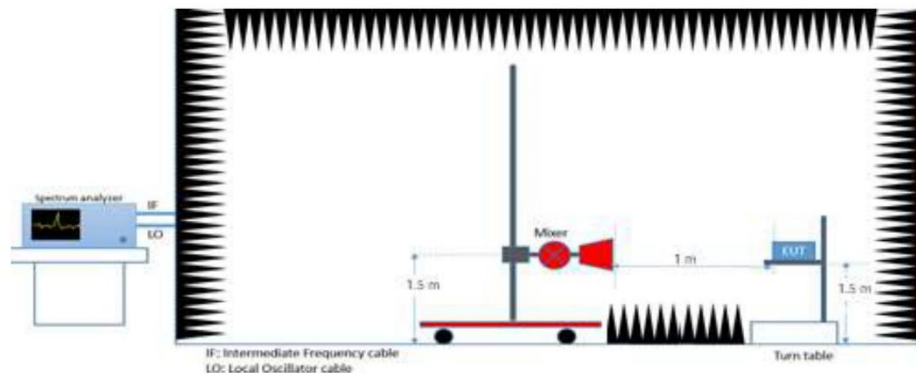
8.2 Test Procedure

ANSI C63.10-2020 Section 9.4

The occupied bandwidth (OBW) is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

a) The following procedure shall be used for measuring 99% power bandwidth: Use the following spectrum analyzer settings:

- 1) Span equal to approximately 1.5 times the OBW, centered on the carrier frequency
- 2) RBW, prefer 1% to 5% of OBW, or a minimum of 1 MHz if this is not possible due to a large OBW
- 3) VBW approximately $3 \times \text{RBW}$
- 4) Set the reference level of the instrument as required to reduce the chance of the signal amplitude exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.1.6.
- 5) Sweep = No faster than coupled (auto) time.
- 6) Detector function = peak.
- 7) Trace = max-hold.



8.3 Test date

December 19, 2024 ~ January 17, 2025

It should not be reproduced except in full, without the written approval of ONETECH Corp.

OTC-TRF-RF-001(0)

ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

8.4 Test data

- Test Result: Pass

Operating Freq. (GHz)	99% Bandwidth (GHz)
61.637	3.084

Plots of measurement data



10. Duty cycle, Off Time Requirement

10.1 Test Requirement

§ 15.255 (c)(2)(iii)(A)

(A) The peak EIRP shall not exceed 14 dBm, and the sum of continuous transmitter off-times of at least two milliseconds shall equal at least 25.5 milliseconds within any contiguous interval of 33 milliseconds, except as specific in paragraph (c)(2)(iii)(B) of this section;

10.2 Test Procedure

See section 9.2 of this report.

10.3 Test date

December 19, 2024 ~ January 17, 2025

10.4 Test data

-. Test Result : Pass

-. Test Date : December 19, 2024 ~ January 17, 2025

Chirp Width (us)	Chirp period (us)	Chirp number In Bust Period	Burst Period (ms)	On Time (ms)	Off Time (ms)	Limit
1.80	50.0	380	19.0	0.684	32.316	25.5 ms off time per 33 ms

Chirp number In Bust Period = Bust Period (ms) / Chirp Period (us)

On Time = Chirp Width (us) * Chirp number In Bust Period

Off Time = 33 ms - On Time (ms)



Plots of measurement data



RANIX Inc.

h. If the radar is to be certified for operation over the 57.0-64.0 GHz band segment under the §15.255(c)(2)(iii)(B) requirements, in addition to showing compliance to the stated limits, provide data showing that the fundamental emission bandwidth is wholly contained within the authorized band segment and time domain data demonstrating compliance to the associated off time requirement. Where applicable, explain comprehensively how the “fixed” requirement will be satisfied and maintained or how the device will be limited to exterior vehicular applications.

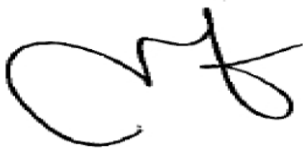
- Not applicable.

i. If certifying a pulsed radar for operation over the 57.0-64.0 GHz band under the §15.255(C)(3) rules requirements, in addition to showing compliance with the specified limits, show that the fundamental emission bandwidth is constrained to the designated band segment and provide time domain data showing the maximum pulse duration and the maximum duty cycle within any three μ s time window.

If the radar device is to be certified under multiple rule parts, data shall be provided demonstrating compliance with the corresponding rule requirements. In addition, information shall be provided on how switching between modes is limited to 33-ms time increments.

- Not applicable.

Your sincerely,



Name: Hong Koo Jung

Date: January 20, 2025