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RDR255 PRE-APPROVAL GUIDANCE CHECKLIST

Date: 2025-01-17

To:
Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mills Road
Columbia, MD

FCC ID: 2AYHY-EM410

Subjects: 364244 D01 Meas 15.255 Radars v01 Annex B - PAG Checklist

Requirements	Explanation
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.	The device is applying under §15.255(c)(2)(iii)(A) and limited the the frequency range to 57~64GHz: EIRP is determined. EIRP Power please see the report “FCCSZ2024-0055-RF5_15.255_60GHz Radar_Report-1” page 34.
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. This device is applying under §15.255(c)(2)(iii)(A).
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. This device is applying under §15.255(c)(2)(iii)(A).

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.	The device is applying under §15.255(c)(2)(iii)(A) and limited the the frequency range to 57~64GHz: EIRP is determined. Part 15.255(c)(2)(i) is not applicable.
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.	N/A. Device applying under §15.255(c)(2)(iii)(A).
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.	N/A. Device applying under §15.255(c)(2)(iii)(A).
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.	Yes. Device applying under §15.255(c)(2)(iii)(A). Fundamental emission bandwidth please see report “FCCSZ2024-0055-RF5_15.255_60GHz Radar_Report-1” page 32, $F_{\text{low}}=59.77138\text{GHz}$ and $F_{\text{high}}=61.6376\text{GHz}$, which is located in the band 57~64GHz. Time domain data demonstrating compliance to the associated off-time requirement please see report page 29~30. TX Off time=29.943ms in a burst period 33ms, which is greater than limit 25.5ms.

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.	N/A. Device applying under §15.255(c)(2)(iii)(A).
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.	Not applicable, device is applying under §15.255(c)(2)(iii)(A) .
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.	This device is just applying under §15.255(c)(2)(iii)(A).

Subjects: Part 15.255 RDR255 Pre-Approval Guidance Checklist v01

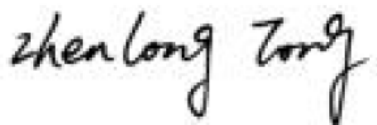
Requirements	Explanation
1. Identify the specific rule section under which certification is being sought	This device is applying under §15.255(c)(2)(iii)(A).
2. Describe the radar modulation (e.g., pulsed, FMCW, other)	FMCW.
3. State the intended use case(s), e.g., unmanned aircraft, indoor or outdoor, vehicular in-cabin, etc.	1.This equipment is prohibited to be used on satellite equipment.

	2.This equipment is field disturbance sensor and fixed installation. It is prohibited to use it on the vehicle radar systems. 3.This equipment is prohibited to be used on the aircraft. 4.This equipment is used indoors. This informaiton still stated on user manual page 12.
4. If applying under §15.255(c)(2): –Describe how conducted output power is determined	The device is applying under §15.255(c)(2)(iii)(A) and limited the the frequency range to 57~64GHz: EIRP is determined. Part 15.255(c)(2) is not applicable.
5. If applying under §15.255(c)(2)(v) for operation in the 60.0-61.5 GHz ISM band –Demonstrate that the transmitter occupied bandwidth (OBW) is wholly contained within the 61.0-61.5 GHz band	N/A. Device applying under §15.255(c)(2)(iii)(A).
6. If applying under §15.255(b)(3) for operation onboard unmanned aircraft –Show that the transmitter OBW is contained within the 60-64 GHz band segment –Describe how altitude restriction will be satisfied –Provide time domain data that demonstrates compliance to the off-time requirement	N/A. Device applying under §15.255(c)(2)(iii)(A).
7. If applying under §15.255(c)(2)(i) for operation over 57.0-59.4 GHz –Show that the transmitter OBW is contained within the 57.0-59.4 GHz band segment –State whether usage will be limited to outdoor or indoor only, and if so, describe how will such limitations be ensured	N/A. Device applying under §15.255(c)(2)(iii)(A).
8. If applying under §15.255(c)(2)(ii) for operation over 57.0-61.56 GHz –Show that the transmitter OBW is contained within the 57.0-61.56 GHz band segment	N/A. Device applying under §15.255(c)(2)(iii)(A).
9. If applying under §15.255(c)(2)(iii)(A) for operation over 57.0-64.0 GHz –Show that transmitter OBW is contained within 57-64 GHz band segment	applying under §15.255(c)(2)(iii)(A) -Operating at 60.000-64.000GHz within 57-64 GHz band. OBW is 3.2256GHz, Please see the detail test data in report “FCCSZ2024-0060-RF_FCC PART 15.255_60GHz Radar_Report-1” page 30~31.

–Demonstrate with time domain data plots that the off-time requirement is satisfied	–Within 33ms, the off-time is 28.62ms, greater than 25.5ms. Please see the detail test data in report “FCCSZ2024-0060-RF_FCC PART 15.255_60GHz Radar_Report-1” page 29.
10. If applying under §15.255(c)(2)(iii)(B) for operation over 57.0-64.0 GHz –Show that transmitter OBW is contained within 57-64 GHz band segment –Explain how ‘fixed’ requirement is satisfied and maintained (if applicable) –Explain the intended vehicle application and how the device will be limited to vehicular use (if applicable) –Demonstrate with time domain data plots that the specified off-time requirement has been satisfied	N/A. Device applying under §15.255(c)(2)(iii)(A).
11. If applying under §15.255(c)(3) for pulsed radar operation over 57-64 GHz –Show that transmitter OBW is contained within 57-64 GHz –Specify the maximum pulse duration and provide supporting time domain data –Provide time domain data plot that demonstrates the maximum duty cycle in any 3 μs time window	N/A. Device applying under §15.255(c)(2)(iii)(A).

If you have any questions, please feel free to contact us at the address shown below

Sincerely



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