
From: 김민석

Sent: Monday, March 01, 2010 6:41 PM

To: pctesttcb@pctestlab.com;

Subject: [AW] Follow-up Questions Regarding FCC ID: BEJ-119AN

Dear Gregory Czumak / PCTEST LAB

Regarding to the questions,

1. Regarding your response to question 2, I do not see anything in the revised user's manual or theory of operation that addresses the requirement regarding ceasing transmission in the absence of legitimate data. If this information is located in the revised theory of operation, please specify its exact location. If it is not, then please address this question.

=> Kim: please see page 20 of the user manual and attached the revised theory of operation.

■ The product automatically discontinue transmission in case of either absence of information to transmit or operational failure.

2. Regarding your response to question 8, the current MPE report is acceptable for this application, but, in the future, please be sure to use precise antenna gain values in the MPE calculations.

=> Kim: thank you for guide and for your reference, attached file with revised ADT report(RF exposure)

If you have any question, please inform me.

Thank you.

From: PCTEST TCB/CB

Sent: Tuesday, March 02, 2010 8:03 AM

To: '김민석'

Subject: Follow-up Questions Regarding FCC ID: BEJ-119AN

Dear Mr. Seok,

Thank you for your email.

1. Regarding your response to question 2, I do not see anything in the revised user's manual or theory of operation that addresses the requirement regarding ceasing transmission in the absence of legitimate data. If this information is located in the revised theory of operation, please specify its exact location. If it is not, then please address this

question.

2. Regarding your response to question 8, the current MPE report is acceptable for this application, but, in the future, please be sure to use precise antenna gain values in the MPE calculations.

The item indicated above must be submitted before processing can continue on the above referenced application.

Sincerely,

Gregory Czumak
Senior Certification Engineer
Quality Manager

From: 김민석

Sent: Friday, February 26, 2010 10:30 AM

To: pctesttc@pctestlab.com;

Subject: [AW] Questions Regarding FCC ID: BEJ-119AN

Dear Gregory Czumak / PCTEST LAB

Regarding to questions of FCC ID: BEJ-119AN,

1. Please revise the installation guide to include the statements required by Sections 15.19 and 15.21, the RF exposure warning statement, and the statement to the user regarding the required indoor usage in the low UNII band (Section 15.407(e)). Please note that the installation guide must instruct the installer to provide all of this information to the user.

=> Please see the attached integrator guide and the statement of User manual.

But, integrator guide has to be aware not to provide information to the end user regarding how

to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

2. Please address Section 15.407(c).

=> Please see the attached User manual and the theory of operation.

3. The operational description (both NII and DTS) does not provide any detailed description of the RF operation of the EUT (e.g., how are the RF signals generated? How is the modulation applied? etc.). Please submit an operational description that does so.

=> Please see the attached the theory of operation.

4. In the Modular Approval checklist, item #3 states that the EUT is self-powered, however, the installation guide references a power input connector. Please verify that the module has its own power supply regulation, as required. Please revise the modular approval checklist accordingly.

=> Please see the attached the Modular request letter and module has its own power supply regulation.

5. In the Modular Approval checklist, item #4 states that the EUT has unique antenna connectors- please describe them.

=> Please see the attached the Modular request letter.

6. In the Modular Approval checklist, regarding item #6: the installation guide must advise the installer of this requirement. Please provide an example of the external label, and revise the installation guide accordingly.

=> Please see the attached integrator guide and User manual.

7. Please describe the antennas used by the EUT.

=> Each as pattern antenna has a matching push connector (marked SW-1 to Sw-4) for conducted measurements.

8. The MPE reports list a single antenna gain of 3.5 dBi. It is unlikely that an antenna maintains this gain over 600 MHz of band. What is the max gain per band? Please revise the MPE reports accordingly.

=> The maximum antenna gain permitted (for devices in the bands 5250-5350 MHz (2.93 dBi) and

5470-5725 MHz (3.42 dBi)), (for devices in the band 5725-5825 MHz (3.24 dBi))

If we need to revise MPE report by your guide, inform us. ADT will revise their reports at once.

9. The operational description states that the EUT is capable of 18 MHz bw operation, but no such test data is provided. Please confirm that the EUT only implements 40 MHz bw operation.

=> Please see the attached the theory of operation.

10. Please confirm that the 15B DoC was issued by a test lab accredited to ISO/IEC 17025 for this type of testing.

=> Please see the attached FCC DoC cert file.

11. Please submit a copy of the test lab's ISO/IEC 17025 scope of accreditation in English, demonstrating its capability to perform 15.247 and 15E testing.

=> Please see the attached FCC 15C E file.

12. Please provide spurious radiated emission data for each of the EUT's 4 transmit chains (both DTS and NII).

=> As WMDA-119AN is 4TX/1RX, Transmitters won't work individually.

So there is no spurious radiated emission data for each of the EUT's 4 transmit chains.

13. Please specify the detector function (peak, rms average, etc.) used in the DTS EMC report to perform the following tests: 6 dB bw, PSD, bandedge and RF spurious conducted.

=> **PEAK detector . Addressed on page 23,28,31 of RF981009L05 (15.247)
_rev.pdf**

14. Please specify the detector function (peak, rms average, etc.) used in the NII EMC report to perform PSD testing.

=> **SAMPLE detector . Addressed on page 41 of RF981009L05-1 (15.407)
_rev.pdf**

15. The DFS report only provides data for the hi band. Please submit data for the low band also.

=> **DFS test is to confirm the capacity of device which can detect and avoid the radar signal.**

Per ADT's experience, FCC do the final test only check one band. So ADT think the data is enough.

(Additional questions)

1. Please confirm that, when psd measurements were performed (both DTS and NII), the transmit chains not being tested were tuned to the same frequency channel as the chain being measured (see attached slide from October 07 FCC Workshop presentation).

=> **The test frequency of 4 TX chain is the same.**

EX : IF chain 0 transmit at 5190MHz , other chains transmit at 5190MHz too.

2. Please submit the total (summed) RF spurious conducted emission levels, as required by FCC policy (see attached slide from October 07 FCC Workshop presentation).

=> **Please see the attached for sum of 4 TX chain.**

If you have any question, please inform me and ADT.

Thank you.

From: PCTEST TCB/CB

Sent: Friday, February 26, 2010 10:00 AM

To: LGE - Kim Min Seok

Subject: ADDITIONAL Questions Regarding FCC ID: BEJ-119AN

To: Mr. Kim Min Seok / LG Electronics Inc.

From: Mr. Gregory Czumak / PCTEST TCB

RE: FCC ID: BEJ-119AN

Applicant: LG Electronics USA

Correspondence Reference Number: BEJ0100-A

Confirmation Number: 1Y1001250100-1

Date of Original Email: February 24, 2010