

Adrián Gallardo Alcázar

De: oetech@fcc.gov
Enviado el: miércoles, 16 de julio de 2025 16:26
Para: DEKRA Spain - RCB Admin SP
Asunto: Response to Inquiry to FCC (Tracking Number 714750) (TCB)

Importancia: Alta

Inquiry on 06/16/2025 :

Inquiry:

Dear Sir or Madam,

We are writing in reference to KDB 987594 D03 v03r03, specifically Question 23 (What are the guidelines for certifying a VLP device intended for only automobile and truck use?). We have some questions regarding Point No. 1 (Antenna and Cable Testing).

One of our clients, a supplier of radio equipment for car manufacturers, has several Stock Keeping Units (SKUs) that differ only in cable length, depending on the specific car model.

Our primary question is: **Is it acceptable to test only a single worst-case representative SKU to cover all variations, or must each individual SKU be tested separately?** Given the number of SKUs involved, testing each one would be both complex and costly.

If a worst-case approach is acceptable, what criteria should be used to define the worst-case SKU? Based on our engineering judgment, the worst-case would likely be the SKU with the longest cable. However, we would appreciate your guidance on how to proceed.

Conversely, if all SKUs must be tested individually, and the manufacturer initially certifies one SKU but later adds another, would this require a Class II Permissive Change (C2PC)?

We appreciate your support and look forward to your clarification.

Best regards,

FCC response on 06/18/2025

Does the conducted power change based on the length of the cable?

---Reply from Customer on 06/20/2025---

Dear Sir / Madame,

Yes, when the cable is longer, the conducted power increases; when the cable is shorter, the conducted power decreases.

The client's intention is for the EIRP to remain the same, regardless of the cable length.

The proposed testing approach could involve testing the SKU with the longest cable length, as this would require the highest conducted power among the different setups. However, please confirm.

Best regards.

---Reply from Customer on 06/20/2025---

Dear Sir / Madame,

Yes, when the cable is longer, the conducted power increases; when the cable is shorter, the conducted power decreases.

The client's intention is for the EIRP to remain the same, regardless of the cable length.

The proposed testing approach could involve testing the SKU with the longest cable length, as this would require the highest conducted power among the different setups. However, please confirm.

Best regards.

FCC response on 06/20/2025

If the conducted power is changing based on cable length, how is that controlled so that the power is not exceeded based on the cable length the installer uses?

---Reply from Customer on 07/08/2025---

On the production line, when the vehicle is assembled, all internal ECUs are programmed according to the Vehicle Identification Number (VIN), which also determines the specific carline variant. Each Head Unit (HU) includes NVRAM configurations for all supported carlines, and the correct NVRAM is activated based on the identified carline during installation.

*To ensure compliance with regulatory limits, the **EIRP (Equivalent Isotropically Radiated Power)** ? calculated as **EIRP = Pt - Lc + Ga** ? must remain constant or within an acceptable range without exceeding the maximum allowed value. Since the **cable losses (Lc)** and **antenna gain (Ga)** are predefined, it is crucial to set the **transmitted power (Pt)** at the IDCEvo connector appropriately. This power must be adjusted per carline to compensate for specific losses and ensure the final EIRP stays within the required limits.*

FCC response on 07/15/2025

Sorry, I don't understand your explanation. To reiterate the question, if the installer uses a specific cable length, how is the conducted power controlled? Is the installer also configuring the power based on the cable length?

---Reply from Customer on 07/16/2025---

Dear Sir / Madame,

The conducted power control is done through a power configuration file, NVRAM. ♦

For each car line, there is a different NVRAM file that adjusts the conducted power depending on the losses introduced by the specific cable length of that car line. ♦

In this way, the radiated power remains the same regardless of the car line where the Head Unit is installed.

Best regards,

FCC response on 07/16/2025

At a minimum, the shortest and longest cable assembly should be tested. The test report/user manual should clearly list all the cable lengths possible. Our guidance in KDB 987594 D03, Q23 should be followed.

Attachment Details:

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