



News Letter

1. FCC在2017年3月发布新的KDB 772105, 对于家用电器产品的一些认证要求。

Question: What household appliances, identified as Part 15 unintentional radiators, are considered exempt from the equipment authorization procedures?

Answer: A household appliance using digital logic (an unintentional device or system that generates and uses timing signals or pulses at a rate in excess of 9,000 pulses or cycles per second, and uses digital techniques as defined in Section 15.3 (k)) is classified under Part 15 Subpart B as a Class B digital device (as defined in Section 15.101) requiring an equipment authorization under the Verification procedure (Section 2.902). However, some appliances may be exempt from an equipment authorization procedure under Section 15.103.

Exempt household appliances are electrical machines intended for household tasks that assist persons in washing and drying clothes, household cleaning, cooking, or food preparation; or is equipment that is directly involved in conditioning the supply of household water and air (heating, cooling and humidifying) in a residence. This includes appliances such as a vacuum cleaner, washing machine, dishwasher, clothes dryer, air conditioner (central or window), etc. This exemption is limited to basic housekeeping appliances and is not intended to apply to all home-use products that may contain digital logic.

To be exempt under Section 15.103, only the digital circuitry directly responsible for operation of the basic functions associated with the appliance is exempt, and must be contained within the major appliance and not remotely connected via wire, cable or other communication system. For example, this includes the digital controller board for a washing machine responsible for different cycles and washing modes.

Appliances that (1) contain other ancillary functions (not directly responsible for the basic functions), or (2) contain other non-housekeeping appliance or other functions, are not exempt from equipment authorization procedures and regulations. These other functions require testing and compliance to the appropriate equipment authorization procedures and regulations.

<https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?id=33062&switch=P>



News Letter

2. 对于IEEE 802.11无线发射的产品，SAR的测量程序在KDB248227 D01的2.2章节有详细描述，需要添加duty factor的测试，并计算在SAR的测试结果中。

[KDB 248227 D01 802.11 Wi-Fi SAR v02r02](#), for guidance on performing SAR measurements for devices incorporating IEEE 802.11 wireless transmitters.

Section 2.2 Duty Factor Control

A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement. The test frequencies established using test mode must correspond to the actual channel frequencies required for operations in the U.S. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. In addition, a periodic transmission duty factor is required for current generation SAR systems to measure SAR correctly. Unless it is permitted by specific KDB procedures or continuous transmission is specifically restricted by the device, the *reported* SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. When a device is not capable of sustaining continuous transmission or the output can become nonlinear, and it is limited by hardware design and unable to transmit at higher than 85% duty factor, a periodic duty factor within 15% of the maximum duty factor the device is capable of transmitting should be used. The *reported* SAR must be scaled to the maximum transmission duty factor to determine compliance. Descriptions of the procedures applied to establish the specific duty factor used for SAR testing are required in SAR reports to support the test results.

3. 对于通过硬件变更的调制方式，是否可以在原始案件的基础上进行二类变更呢？

Question: We originally certified our licensed radio in continuous wave (CW) mode without modulation. We now want to add modulation via hardware that was in place at the time of the original certification. Can this be done via a Class II permissive change?

Answer: Since the new modulation is a factory software/firmware change to be implemented at the manufacturing level, and not by a third party or via a field update, it is possible to apply for a Class II Permissive change. However, if the modulation implementation requires the addition of a hardware modulation circuit, a new FCC certification application would be warranted. Lastly, per [178919 D01 Permissive Change Policy v06](#), Section V(D) "Third party activation of software changes for any radio parameter such as new frequencies, output power, and/or modulations, or changes that modify the circumstances under which the transmitter is approved to operate, are not allowed unless the device was approved as a software-defined radio (SDR)".



News Letter

4. R&TTE指令允许使用EMCD和LVD在OJ上列出的协调标准，那RED也允许吗？

Question: The EMC Directive and LV Directive do not apply to products which are within scope of the R&TTE Directive or RE Directive; but the R&TTE Directive allows use of harmonised standards from the Official Journal of the EMC Directive and LV Directive to provide presumption of conformity with the R&TTE Directive. Does the new Radio Equipment Directive (RED) also allow this?

Answer: When choosing standards for the EMC and Safety assessment for a radio (Article 3.1 of R&TTED and RED), it is important to pick the correct standard for the product. If the EMC or Safety standard is listed on the R&TTED or RED Official Journal, then it provides presumption of conformity to that Directive. The EMC standard for the radio link may be in the RED Official Journal, but the EMC standard for other functions and the safety standard might not be there. If the standard is on the Official Journal of the EMCD or LVD, then it can be used for RED but it does not provide presumption of conformity. The manufacturer should explain in their risk assessment why they chose that standard.

All devices which contain a radio fall under the RED, whether a single radio, a combination of multiple radio products, or a combination of radio and non-radio products. When a radio product and a non-radio product (e.g. micro-controller circuitry) are integrated into a single product, it is necessary to assess conformity of both products functioning at the same time against the essential requirements of the RED. For example, the transmitter carrier of the radio equipment can generate harmonics that may generate intermodulation emission products with the micro-controller oscillator clocks, which may or may not meet the RED.

5. EU部分标准更新。

[ETSI EN 301 893 V2.1.1](#) - (May 2017) - 5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

[ETSI EN 301 908-3 V11.1.3](#) - (April 2017) - IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU; Part 3: CDMA Direct Spread (UTRA FDD) Base Stations (BS)

[ETSI EN 300 440 V2.1.1](#) - March 2017 - Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

★ **[EN 300 440 V2.1.1](#)** has been published by ETSI but refused by the EU Commission. We are waiting for the final solution from ETSI and the EU Commission on how they will fix the problems with EN 300 440 V2.1.1. We do know that Receiver Category 3 in EN 300 440 would not mandate receiver performance testing; but receiver performance testing is an important part of the RED. For now, the instruction is that Receiver Category 3 in EN 300 440 V2.1.1 cannot be used for meeting the RED. Even Receiver Category 2 may be difficult to use because test limits may need to be found from other parts of the standard.