TCB Workshop

Part 15 updates

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RFID

- Implanted passive "sensor" (tag) used with external RF ID Readers are not covered by TCB exclusion for implant transmitters and are allowed for TCB approval.
  - TCBs must consult TCB exclusion list to determine if the external RF ID reader can be approved by the TCB.
- Implanted active (battery powered) tags cannot be approved by TCBs

RFID

- RFID Passive Tag Policy

  A passive tag does not contain batteries and is not certified individually.

  Only the tag reader needs to be tested. At this time, the current technology for passive tags is such that the emission levels from the passive tags are much lower than the allowed levels for the tag reader.

  *Tags that translate the reader frequency (operates on a frequency different from the reader) must be tested with the reader.

  The fundamental passive tag emissions may not operate within a restricted band, just as the tag reader is prohibited from operating in a restricted band. Implanted passive "sensor" (tag) used with external RF ID Readers are not covered by TCB exclusion for implant transmitters and are allowed for TCB approval.

  – TCBs must consult TCB exclusion list to determine if the external RF ID reader can be approved by the TCB.

RF ID

- Battery assisted passive tags.

  – Battery assisted passive tags (BAPT) can be treated as passive tags under the following conditions. Certification not required for BAPT's.
  1) The device does not operate in a restricted band.
  2) The RF portion of the BAPT must be isolated from the battery.
  3) The field strength level of the BAPT is comparable to passive tags.

Section 15.201(a)

- Section 15.201(a) Lower power devices(40 dB below 15.209) are subject to verification
  - These devices may not operate in a restricted band in 15.205.
    - Per 15.205(c), there are some exceptions to operating under a restricted band but 15.201 is not an exception. Section 15.205(c) also indicates that regardless of the field strength of the device, it cannot operate in the restricted bands.

AM transmitters operating under Section 15.219

- Section 15.219 restricts the length of the antenna, connecting cable and ground lead to 3 meters. Watch out for filings with elevated installation mounting that require running a ground connection down to a ground plane. It is the ground, which now is well over 3 m itself and becomes the major radiator. This is how Certified AM transmitters are being installed or modified to operate over long distances.

UPCS Section 15.319(f)

- Section15.319(f) requires the following:

"(f) The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude transmission of control and signaling information or use of repetitive codes used by certain digital technologies to complete frame or burst intervals.“

- Reference to the Annex A of ANSI C63.17-2006 shows that the evaluation method for this item is "Declaration with explanation".

1. What is the criteria for "absence of information to transmit"?

   -Intent is to prevent continuous occupation of the band when there is no data to send. When there is no data, transmission must automatically cease.

2. What is the criteria for "operational failure"?

   -Intent is to require transmission to discontinue when there is an operational failure (e.g. Power, communication failure)

Miscellaneous Updates

- Devices subject only to verification or are exempt may not be Certified.
  - Section 15.101and 15.103 indicates verification and exemption.
  - Some License transmitters are verified.
- Loop antennas are required for measurements below 30 MHz.
- Bluetooth and WLAN composite filings
  - When filing Bluetooth as a DTS, file a DTS test report.
- Cell phones with computer port connectors must also be authorized as a computer peripheral.
- PDCF (Pulse Desensitization Correction Factor)
  - For pulsed modulated device, (Non UWB devices), a 100% continuous burst signal requires PDCF. 100% transmission of CW signal does not require PDCF.
  - Radar fluid level sensor transmitters commonly use short pulse widths.

Miscellaneous interpretations

- KDB # 252102
  - Wireless Keyboards may not operate under 15.231
- KDB # 388407
  - Operation in a plane is considered indoors
    - Not prohibited by Section 15.407 in the UNII rules.
- KDB # 685804
  - Updating an FCC approved device to meet the European RoHs (No lead) directive.
    - Section 2.1043 rules apply

The End