

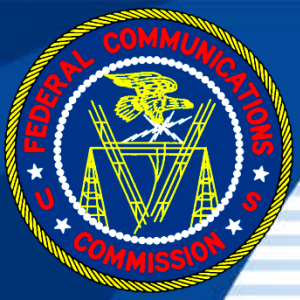
Updates on KDB 680106 D01 & Wireless Power Transfer (WPT)

Office of Engineering and Technology
Laboratory Division



Overview

- KDB Publication 680106 D01
 - Only minor updates are expected in the near-term
 - Updates are intended to address the most FAQs associated with this publication
- General WPT Updates
 - Vehicular WPT systems should request an Experimental License under 47 CFR 5 for pre-authorization public testing
 - Such licenses are in addition to traditional testing and authorization requirements



Handset Sleeve & Accessory Guidance

Office of Engineering and Technology
Laboratory Division



Overview

- The term “sleeve” is inclusive of accessories including sleds, cases, battery covers, RF ID readers, and other affixed devices
- Sleeve guidance is required due to the interaction of the sleeve’s electrical & mechanical characteristics with the host device’s radiative properties.
 - Potential for increased SAR due to additional transmitters
 - Alteration in mode of usage (i.e. from side of head to front)
 - Impact on host device’s SAR pattern
 - Potential to impact the reported compliance of the host device
- Handset sleeves have traditionally required independent inquiries depending upon usage & technology. FCC OET Lab has consolidated guidance pertaining to common sleeve types to streamline this process.
 - Bluetooth based sleeves
 - Wireless power transfer sleeves
 - Push-to-Talk sleeves
 - Mobile hotspot sleeves
 - Wireless power transfer battery covers
 - Passive sleeves
 - Sleeves which disable phone
 - RFID reader sleeves
 - Alternative configurations



KDB648474 D05

- KDB648474 D05 will consist of the following:
 - Prior TCB Workshop Guidance:
 - October 2010 TCB Workshop
 - April 2013 TCB Workshop
 - October TCB 2013 Workshop
 - KDB Publication 648474 D04 Section 6:
 - Optional batteries, Near Field Communications, Wireless Charging, and similar accessories
 - This section will be removed from KDB 648474 D04 during the next revision
 - KDB Publication 648474 D03:
 - HAC & EMC Considerations
 - Grantee Holder / 3rd party accessory guidance
 - Replaces Wireless Power Consortium battery cover guidance with generic WPT accessory Guidance



Applications

- Revised guidance intended to apply to most handset accessories:
 - Client devices interfaced with and/or used simultaneously with the host under portable conditions
 - Includes body, head, and extremity use-cases
 - Applicable accessories often referred to as sleeves, cases, and sleds, but also include smaller affixed devices such as bar code readers and battery covers
- Revised guidance is not intended to apply to:
 - Accessories which free hang from a cable interfaced with the host handset
 - Client devices which constitute a physically large systems
 - Examples include smart-bike cradle systems, etc.



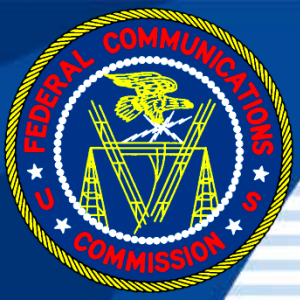
General Guidance

- Sleeves are prohibited from nullifying host's authorization
 - SAR/EMC/HAC
- All sleeves incorporating intentional radiators
 - Must be authorized in accordance with their corresponding rule parts
 - Must comply with SAR guidelines as defined by 47 CFR 2.1093
- Applicable sleeves must be tested under all possible use cases
 - Sleeve operation without host
 - Sleeve operation with host
 - Host operation with sleeve
 - Simultaneous operation
- Passive sleeves are not subject to independent authorization
 - If provided by the host manufacturer
 - Must be tested/approved as integral part of compatible handset
 - Must fall under the compatible handset FCC ID
 - May then be sold for the compatible handset separately or included with handset
 - If provided by 3rd party
 - Should be tested with all compatible hosts if
 - Contains any conductive components
 - Will impact host electromagnetic properties



General Guidance

- Prior to evaluating sleeve + handset characteristics
 - Host should be tested to validate is original authorization characteristics
 - Should verify maximum SAR conditions for each operable wireless mode, exposure condition, and in each frequency band
 - Data should be adjusted to the same power level in original filing
 - Should agree with original filing to +/- 15%
 - Separate measurements should be made for head, body-worn accessory, and hotspot mode for
 - Highest SAR configuration amongst all modes, in each frequency band
 - Any SAR configuration in the original report > 1.2W/kg
 - Test cases with SAR > 1.2W/kg should be repeated with sleeve attached
- Testing should be performed on each type of host that can be used with the sleeve (including GSM/CDMA, USA/International, etc.)
- SAR measurements can then be repeated with sleeve + handset
 - If sleeve can operate independently, separate SAR testing must also be conducted
- Test reduction and exclusions as discussed in KDB 447498 D01 and KDB 643646 D01 may be considered
 - SAR report should include all calculations, test setup data, & any other criteria previously defined in applicable KDB publications



Questions and Answers

Thanks!