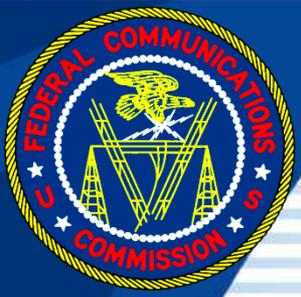


Wireless Power Transfer - Updates on KDB 680106

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Overview

1. Rationale for Simplified Certification Approach
2. Publication 680106 Update
3. Guidance on MPE limits at the lowest frequency range ($f < 100$ kHz)
4. Conclusions



Rationale for Simplified Certification Approach

- **Simplified approach:** Publication 680106 D03-5.b) defines six conditions to be met for obtaining SDoC or Certification **w/o KDB Inquiry submission**
- These conditions are devised prevent situations where H field nearing the MPE limit for mobile conditions
- Accounting for more **complex designs** with multiple coils
- No restriction of coil number of charging mechanism
- Removing arbitrary references to vertical/horizontal positioning for test verifications



Publication 680106 Update

- Reword clause 5.b.(3), applicable to multiple-coil designs:

OLD

- (3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

NEW

- (3) The system may consist of more than one source primary coil, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.



Publication 680106 Update (II)

- Reword clause 5.b.(6), applicable multiple-coil designs:

OLD

- (6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

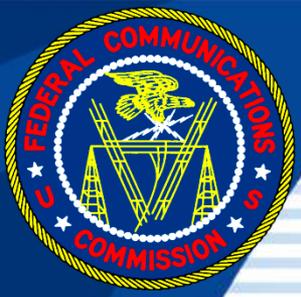
NEW

- (6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.



Guidance on MPE limits at the lowest frequency range ($f < 100$ kHz)

- Determining compliance for any WPT (**both portable and not**) operating at frequency < 100 kHz
- Guidance for case-by-case approvals based on supporting data obtained from measurements and/or numerical simulations
- Considering reference field levels, for external (unperturbed) **temporal peak** field strengths, in all the positions of space relevant for the body exposure
- Not-to-exceed limits temporal peak field strengths :
 - 83 V/m for the electric fieldand
 - 90 A/m for the magnetic field



Conclusions

- Responding to industry need for guidance at the lowest frequency range
- WPT Related, additional details related to additional testing procedures and EUT positioning details in J. Novicky talk at this workshop