

## Response to DRAFT KDB 842590 D01 Upper Microwave Flexible Use Service v01

Hello and thank you for putting together this draft guidance for RF testing of mmWave devices. Please see below our comments for potential inclusion in future guidance on this topic.

Please consider the following:

### General Comments/Questions

1. The spurious emission limit in 30.203(a) does not have a specified distance. If EIRP measurements are performed using the substitution method, then it is understood that the distance is irrelevant. However, if the EIRP is measured using the field strength method in Section 5.5.4 of ANSI C63.26-2015 (via Section 4A of KDB 842590), the field strength will be measured at a specific distance in the far field. Should the radiated emissions limit be adjusted to compensate for varying test distance or is it sufficient to compensate using  $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$ , where D is the test distance (per KDB 971168 D01)?
2. Section 3F of the draft KDB discusses measurement antenna calibration. Can you please provide guidance on how the antennas should be calibrated above 40GHz in terms of whether it should be at 1m distance or in free space?

### Radiated Band Edge Measurements

3. Several other rule parts (e.g. Parts 22, 24, 27) include a provision for measurement of the band edge where a RBW of 1% of the emission bandwidth may be used within the first 1MHz from the band edge. Please consider this for inclusion for mmW band edge measurements to also harmonize with other rule parts.
4. Part 30.203(a) expresses the spurious emission limit as follows: "...in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower." Assuming you are testing a device that can operate with more than one component carrier, should the "channel bandwidth" as mentioned in 30.203(a) refer to the bandwidth of just one carrier or may this be extended to include all carriers? Clarification about this would be helpful to place in this guidance.