



# **Review of TCB PAG Submissions**

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Note: The views expressed in this presentation are those of the authors and may not necessarily represent the views of the Federal Communications Commission.



# Overview

- The FCC STILL has an extensive number of applications to process.
- Industry continues to find innovative ways to use the extended bandwidth afforded by the addition of UNII 4 and UNII 5 – 8.
- Checklist, such as those for UN5GHZ and UN6GHZ, as well as these supplemental TCB Workshop presentations, have greatly increased the efficiency of reviewing applications.
- This session we will be looking at some additional items specific to PAG items UN5GHZ and UN6GHZ.



# Power and PSD EIRP Tables

- Devices which fall under the PAG category of UN5GHZ and UN6GHZ have limits in EIRP
- This requires a power measurement plus an antenna gain
- When summarizing the results in tabular form, **PLEASE** include both the power and antenna gain
- This will greatly aid in reviewing the reports
- Quantities such as duty cycle and cable loss, if applicable, need not necessarily appear in the summary table so long as it is clear they are accounted for in the measurement instrumentation



# Plots – PSD and BW

- UNII 4 and UNII 5 - 8 can have many different bandwidths and channels and thus requires many measurements
- Some labs include in their test report every single measurement made
  - While this is not explicitly required, it's also not disallowed.
  - But this can make for an enormous report.
  - The larger the report, the harder it is to find the information germane for PAG review.
- Some labs don't include enough plots.
  - This was briefly touched on in the April 2021 PAG Review presentation.



# Plots – PSD and BW cont'd

- Good engineering judgement should be used when choosing a subset of plots to appear in a test report
- As an example, Band Width plots
  - Spectrum analyzer settings change depending on the band width of a plot.
  - There should minimally be plots for each different band width.
- As an example, PSD
  - For UNII 4 and UNII 5 – 8, limits are expressed in dBm in any 1 MHz band. General spectrum analyzer settings for RBW and VBW don't change with band width of signal.
  - Low, mid, and high channel plots should suffice.
  - For technologies using partial RUs, please follow specific guidance for full and partial RU devices.





# Class II PC – Adding Bands

## ● Change in FCC ID

- An original grantee of a module [A] adds additional bands (UNII 4, UNII 5 – 8) to an existing module.
- Grantee [B], who had a previous Change in FCC ID to incorporate the original module of grantee [A] under their own grantee code wishes to add the additional bands which grantee [A] just added (UNII 4, UNII 5 – 8).
- This is explained in KDB 291074 D01 General Requirements v01.



## Class II PC – Adding Bands cont'd

- There is no new equipment class
  - Grantee [B] may file a C2PC plus all the required exhibits to demonstrate compliance for the new UNII 4 band.
  - If the original test reports from grantee [A] are to be used, then a cover sheet explaining that the test reports are the originals previously submitted by grantee [A] for the FCC ID.
  - In addition, a letter from the original grantee [A] giving permission to grantee [B] is required to use the filed data.
  - Also, a separate statement that grantee [B] is taking full responsibility for the test data filed is also required.



## Class II PC – Adding Bands cont'd

- There is a new equipment class
  - A second change in FCC ID must be filed.
  - In this case the change in FCC ID would follow the procedures in publication KDB 249634 requiring all the exhibits for a change in ID, including a second approval letter from the original grantee and an explanation for the reason for the second change in FCC ID.
  - Note that no test reports are required for a second change in FCC ID.

**Note: The second Change in FCC ID method can also be used even when no new FCC ID is required.**





**Questions?**

**Thank You!**