American Certification Body, Inc.

News Letter

1. ACB 欧洲最近在意大利米兰完成了为期两天的研讨会。研讨会由Michael Derby 和 Pieter Robben主持，内容涵盖了美国FCC，加拿大ISED，欧盟RED和日本MIC的培训以及R&S的5G新技术介绍。

ACB Europe has recently completed a two day seminar in Milan, Italy. Attendees from around the world came to Italy to hear two ACB speakers, Michael Derby and Pieter Robben, with training on FCC for USA, ISED Canada, RED for the EU and MIC for Japan. ACB were also joined by Rohde & Schwarz for a presentation about 5G technology. The event was hosted at IMQ Test Lab. We would like to thank all those who attended the seminar and helped to make it such a success. Next on ACB's training agenda, our American team will be performing the seminars across the USA.
For any questions, or to request training for your company, contact:
https://acbcert.com/contact/

2. 六月在英国召开的EMC测试实验室协会(EMCTLA)会议收获了圆满成功。ACB欧洲总裁Michael Derby做为EMCTLA的技术部秘书长出席了会议。

In June there was the most recent meeting of the EMC Test Lab Association (EMCTLA) in the UK. ACB's European Director Michael Derby is the technical secretary of the EMCTLA and was pleased to see such high numbers in attendance and good technical presentations from those attending.

3. CEPT ECC ERC Recommendation 74-01 发布2019新版本。在新版ETSI EN标准发布前，这些更新的内容暂时不会影响到ETSI EN的测试。

All the spurious emissions in ETSI EN standards are based on the CEPT ECC document Recommendation 74-01. This includes the limits, detector types and bandwidths. With changes in recent years associated with the digital dividend, band allocations and 5G; limits in some bands are changed.
This does not affect ETSI EN testing immediately, but you will begin to see these updated emissions limits being incorporated into new versions of ETSI EN standards as they become published.
The document can be seen here:
https://www.ecodocdb.dk/download/3af8bcdd-43ae/ERCREC7401.pdf
Below are the detailed changes of the new version (2019) compared with the old version(2011) CEPT ECC document Recommendation 74-01:

<table>
<tr><th>Changes</th><th>2011</th><th>2019</th></tr>
<tr><td>Annex 1: A1.1 Informative Background of Fixed Service are changed.</td><td>• frequency band from below 1 GHz to 95 GHz;
• traffic capacity from 9.6 kbit/s up to Multi -Gigabit transport;
• channel separations from 25 kHz up to ~ 5 GHz in the highest bands;
• modulation formats from 2 to 1024 states (amplitude and/or phase and/or frequency states).</td><td>• frequency band from below 1 GHz to 175GHz;
• traffic capacity from 9.6 kbit/s up to Multi-Gigabit transport;
• channel separations from 25 kHz up to ~ 5 GHz in the highest bands;
• modulation formats from 2 to 2048 states (amplitude and/or phase and/or frequency states).</td></tr>
<tr><td>Annex 2: Table 2.1 Limits for 2.1.2 and 2.1.3 within the bands 47-74MHz and 694-862 MHz are changed.</td><td>-54 dBm, for 47-74MHz and 694-862 MHz</td><td>-36 dBm, for 47-74MHz and 694-862 MHz</td></tr>
<tr><td>Annex 2: table 2.1 new add 2.1.6, 2.1.7, 2.1.8</td><td>none</td><td>
<table>
<tr><td>2.1.6</td><td>Base Stations using AAS and beamforming with integrated antennas operating below 6 GHz (Note 5)</td><td>9 kHz ≤ f ≤ 1 GHz</td><td>-36 dBm(Note 6)</td></tr>
<tr><td></td><td></td><td>1 GHz < f ≤ F_{UPPER} (see recommends 3)</td><td>-30 dBm (Note 6)</td></tr>
<tr><td>2.1.7</td><td>Base Stations using AAS and beamforming with integrated antennas operating above 24.25 GHz (Note 5)</td><td>9 kHz ≤ f ≤ 1 GHz</td><td>-36 dBm (Note 5) (Note 6)</td></tr>
<tr><td></td><td></td><td>1 GHz < f ≤ 18 GHz</td><td>-30 dBm (Note 5) (Note 6)</td></tr>
<tr><td></td><td></td><td>18 GHz < f ≤ F_{UPPER} (see recommends 3)</td><td>-20 dBm/10 MHz (other limits apply for specific frequency separations, see Figure 7) (Note 6)</td></tr>
<tr><td>2.1.8</td><td>Terminals operating above 24.25 GHz using AAS and beamforming with integrated antennas</td><td>9 kHz ≤ f ≤ 1 GHz</td><td>-36 dBm (Note 6)</td></tr>
<tr><td></td><td></td><td>1 GHz < f ≤ 7.25 GHz</td><td>-30 dBm (Note 6)</td></tr>
<tr><td></td><td></td><td>7.25 GHz < f ≤ F_{UPPER} (see recommends 3)</td><td>-13 dBm/MHz and -10 dBm/100 MHz (Note 6) (Note 7) (Note 8)</td></tr>
</table>
</td></tr>
</table>

<table>
<tr>
<td>Annex 4: Table 4.1 limit for 4.1.3 Broadcasting receivers are changed</td>
<td>Limits of EN55013 apply</td>
<td>
Table 12: Broadcast receiver spurious domain emission limits
<table>
<tr><th>Frequency range</th><th>Measurement Facility</th><th>Measurement distance</th><th>Detector type / bandwidth</th><th>Limit (dBµV/m)</th></tr>
<tr><td>30-230 MHz</td><td rowspan="2">OATS/SAC</td><td rowspan="2">10 m</td><td rowspan="4">Quasi peak / 120 kHz</td><td>30</td></tr>
<tr><td>230-1000 MHz</td><td>37</td></tr>
<tr><td>30-230 MHz</td><td rowspan="2">OATS/SAC</td><td rowspan="2">3 m</td><td>40</td></tr>
<tr><td>230-1000 MHz</td><td>47</td></tr>
<tr><td>30-230 MHz</td><td rowspan="2">FAR</td><td rowspan="2">10 m</td><td rowspan="2">Quasi peak / 120 kHz</td><td>32 to 25</td></tr>
<tr><td>230-1000 MHz</td><td>32</td></tr>
<tr><td>30-230 MHz</td><td rowspan="2">FAR</td><td rowspan="2">3 m</td><td rowspan="2">Quasi peak / 120 kHz</td><td>42 to 35</td></tr>
<tr><td>230-1000 MHz</td><td>42</td></tr>
<tr><td>1000-3000 MHz</td><td rowspan="2">FSOATS</td><td rowspan="4">3 m</td><td rowspan="2">Average / 1 MHz</td><td>50</td></tr>
<tr><td>3000- 6000 MHz</td><td>54</td></tr>
<tr><td>1000-3000 MHz</td><td rowspan="2">FSOATS</td><td rowspan="2">Peak / 1 MHz</td><td>70</td></tr>
<tr><td>3000-6000 MHz</td><td>74</td></tr>
</table>
Table 13: FM Broadcast receiver spurious domain emission limits
<table>
<tr><th>Frequency range</th><th>Measurement Facility</th><th>Measurement distance</th><th>Detector type/ bandwidth</th><th>Fundamental Limit (dBµV/m)</th><th>Harmonic Limit (dBµV/m)</th></tr>
<tr><td>30-230 MHz</td><td rowspan="3">OATS/SAC</td><td rowspan="3">10 m</td><td rowspan="6">Quasi peak / 120 kHz</td><td rowspan="3">50</td><td>42</td></tr>
<tr><td>230-300 MHz</td><td>42</td></tr>
<tr><td>300-1000 MHz</td><td>46</td></tr>
<tr><td>30-230 MHz</td><td rowspan="3">OATS/SAC</td><td rowspan="3">3 m</td><td rowspan="3">60</td><td>52</td></tr>
<tr><td>230-300 MHz</td><td>52</td></tr>
<tr><td>300-1000 MHz</td><td>56</td></tr>
<tr><td>30-230 MHz</td><td rowspan="3">FAR</td><td rowspan="3">10 m</td><td rowspan="5">Quasi peak / 120 kHz</td><td>52 to 45</td><td>44 to 37</td></tr>
<tr><td>230-300 MHz</td><td>45</td><td>37</td></tr>
<tr><td>300-1000 MHz</td><td>45</td><td>41</td></tr>
<tr><td>30-230 MHz</td><td>FAR</td><td rowspan="3">3 m</td><td>62 to 55</td><td>54 to 47</td></tr>
<tr><td>230-300 MHz</td><td></td><td>55</td><td>47</td></tr>
<tr><td>300-1000 MHz</td><td></td><td>55</td><td>51</td></tr>
</table>
</td>
</tr>
</table>

4. 作为主机设备制造商开发具有两个预认证模块（1xLTE + 1xWiFi）的产品以及仅具有一个认证模块（1xWiFi）的子产品，请问最终产品认证的最佳方案是什么？

Question from a host manufacture: As a host-device manufacturer developing a product with two pre-certified modules (1xLTE + 1xWiFi) as well as a child product with just one of the certified modules (1xWiFi), I wonder what is the best approach for certification of the end product – use module FCC IDs and label our end-device with both FCC IDs i.e. “contains FCC ID” x 2. Or obtain new host-device FCC ID covering both transmitters.
Can a single FCC ID cover the 2 device scenarios we will have: 1) Parent device with (1xLTE + 1xWiFi) and 2) child device with (1xWiFi)?

Response from ACB: Thank you for your question. There are, not surprisingly, pros and cons associated with both approaches that you will have to take into account as

you make your decision. A few things to consider:
By re-certifying your product with the modules included (in other words, not using the modules' own certifications), you then maintain complete control over the entire device… this may be useful if you choose, in the future, to begin to perform modifications, i.e., permissive changes, to the product, including to the two modules themselves. However, in order to obtain a new certification that covers the two radios, in addition to a full set of test data being submitted in the test report(s) (it is possible that some data re-use may be applicable), you will need to be able to provide proprietary information about the modules (e.g., schematics, BOMs, detailed operational descriptions, etc.) in the equipment authorization application – not all module manufacturers are willing to disclose this information to their customers. One possible method to overcome this obstacle may be to invoke so-called "third party confidentiality", in which the proprietary information is sent directly from the module manufacturer to the TCB, bypassing the host manufacturer, however, some module manufacturers will balk even at this. So, to take this route, you must first ensure that the module manufacturer(s) that you use are willing to work with you to help you obtain your own certification that covers their module(s).

Additionally, I would note that, if you chose this route, you would need to obtain separate FCC IDs for your product and child-product – the FCC does not permit depopulation as a permissive change, since the product and child-product are not electrically identical. So, each would require its own FCC ID.

On the other hand, if you maintain the certification of the modules that you install in your host device, then you will still be required to perform some testing on your host device with the modules installed and operating, but not a full set of testing, as would be required if you were re-certifying the entire device. And, of course, there is no need to go thru the certification process. The limitation is that you do not have the authority to make any modifications to the modules… you would have to approach the module manufacturer and work thru them to affect any such modifications. Regarding the original product and child-product, you will need to have different labels – the first listing the FCC IDs of both embedded modules, and the second listing only the ID of the WiFi module. As an example along those lines, I have seen, in the past, cases in which the label said something similar to, "This device contains the following transmitter(s):" and it then listed multiple FCC ID numbers, with a clear checkmark in front of the specific ID(s) contained within that particular unit.

Finally, I would recommend that you thoroughly digest the info provided in the following KDB Publication, which is intended specifically for host manufacturers:
https://apps.fcc.gov/kdb/GetAttachment.html?id=zVUUifMY6Doa%2BO3Sg0Nygw%3D%3D&desc=996369%20D04%20Module%20Integration%20Guide%20V01&tracking_number=44637

We hope that this has been responsive to your inquiry. Please contact ACB with any additional questions or concerns.

5. ISED 通知：用于移动系统的产品不属于RSS-191和RSS-192范围。

ISED wishes to inform Certification Bodies & Manufacturers that products intended to be used in mobile systems fall outside the scope of RSS-191 and RSS-192.

RSS-191:

This Radio Standard Specification (RSS) sets out requirements for the certification of for radio transmitters and receivers for local multipoint communication systems (LMCS) in the band 25.35-28.35 GHz,point-to-point and point-to-multipoint broadband systems in the bands 24.25-24.45 GHz and 25.05-25.25 GHz, and point-to-multipoint broadband systems in the band 38.6-40.0 GHz

RSS-192:

This Radio Standard Specification (RSS) sets out certification requirements for radio transmitters and receivers of fixed wireless access (FWA) systems, includingpoint-to-point applications in the band 3450 to 3650 MHz.

Please be informed that applications for products that have been incorrectly assessed by Certification Bodies will be refused by ISED and will not be listed in the REL.

Furthermore, ISED would like to inform manufacturers that these standards are currently in revisions. Once new issues are published, equipment manufactured, imported, distributed, leased, offered for sale, or sold in Canada, shall comply with the requirements of these new issues.

6. KDB 789033 D02 v02r01 Note 3 自2019年1月1日起生效.

Reminder about KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Note 3:

Previous KDB guidance permitted compliance with the average and peak limits of Section 15.209 as satisfactory demonstration of compliance for limits as specified in Sections 15.407(b)(1-3). After January 01, 2019 all emissions are required to meet the limits as specified in the rules and it will not be sufficient to show compliance to the limits specified in Section 15.209.
That means, for U-NII Bands 1, 2a and 2c, there is ONLY a Peak limit for spurious radiated emissions that are outside of the restricted bands (-27 dBm/MHz, or 68.2 dBuV/m @ 3m). There is no Average limit for these spurs that are not in restricted bands.

7. Notice from ISED, as of June 15, 2019, Certification Bodies must only accept test reports from recognized Wireless Device Testing Laboratories.