

Response to TCB Findings

1. Please explain with an example; the conversion calculation of -27dBm/MHz into 68.3dBuV/m (at 3m) as listed on page 15 of the test report.

With a resolution bandwidth of 1 MHz, - 27 dBm/MHz converted into Watts = 2 uW.
For calculating field strength

Field Strength (E) = $20\text{LOG}(\text{Square root } (30 \times P) / D \times 10^{-6})$

Where $P = 2 \times 10^{-6}$ watts & $D = 3\text{m}$.

Therefore E = 68.3dBuV/m (at 3m)

2. Was the public notice DA 02-2138 used for the testing? If so please specify which methods in the document have been used for "Peak conducted output power", "PPSD" and "Peak Excursion Measurements".

We have been using the latest Part 15 regulations (Subpart E, Section 15.407) released by the Commission as of December 8, 2003 and Guidance on Measurements for Digital Transmission Systems Section 15.247.

After reviewing the DA 02-2138 document, we noticed that incidentally,

---The measurements for "**PPSD**" were performed as per method 2 of DA 02-2138.

---The measurements for "**Peak conducted output power**" were performed with a resolution bandwidth of 10MHz instead of 1MHz as per the DA 02-2138. Our tested method would yield a higher Peak output power than 1MHz bandwidth measurement as per method 3 of DA 02-2138.

---The measurements for "**Peak Excursion Measurements**" were performed with a RBW = 1MHz and VBW = 3MHz (for trace 1) as described in DA 02-2138 and a RBW = 1MHz and VBW = 300kHz (for trace 2).

3. Please describe how the WLAN complies with the requirements of 15.407(c).

Data Transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, finally to the RF chip. Several special packets (ACKs, CTS, PSpoll, etc...) are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which then turns off at the end of the packet. Therefore, the transmitter will be ON only while one of the four mentioned packets are being transmitted.