

Select MS Responses to ACB Comments

Please revise the PCE EMC report(s) (exhibits 6a-6c) to also provide justification for the various modes/BW's/RB's chosen to produce the final data presented in the reports. Were all such combinations investigated in some manner to determine the worst-case combinations for each test? If a test-reduction procedure was utilized, please describe it, and also describe the engineering judgement used to develop it.

A:

EIRP

The RF power levels were measured in conducted manner with all CBWs. The CBW with highest power was selected for radiated tests.

TX radiated spurious emissions

Previous evaluations have shown, that the currently selected CBW/RB configurations represent the worst case for this test. The evaluations are repeated every now and then to ensure, that the selections remain valid.

Band edge

Previous evaluations have shown, that the currently selected CBW/RB configurations represent the worst case for this test. The evaluations are repeated every now and then to ensure, that the selections remain valid.

In the DTS EMC reports (exhibits 6i and 6k) it appears that only certain, specific modes/BW's/data rates were chosen for testing. Were all such combinations investigated in some manner to determine the worst-case combinations for each test? If a test-reduction procedure was utilized, please describe it, and also describe the engineering judgement used to develop it.

A: RF output power was measured with every data rate on middle channel.

The data rate with highest RF power was further measured on edge channels. The selection was done separately amongst BPSK data rates and QPSK family data rates.

The selected data rates were further used in all other tests as worst case.

The NII EMC reports (exhibits 6l and 6m) appear to provide data for the various tests with only certain specific modes/BW's/data rates, but not all. Were all such combinations investigated in some manner to determine the worst-case combinations for each test? If a test-reduction procedure was utilized, please describe it, and also describe the engineering judgement used to develop it.

A: RF output power was measured with every data rate on middle channel. The data rate with highest RF power was further measured on edge channels. The selection was done separately amongst BPSK data rates and QPSK family data rates. The selected data rates were further used in all other tests as worst case.

SAR Section 3.5 (exhibit 11a) shows numerous 802.11 channel 11 output target levels that are up to 2 dB lower than the targets of other channels in the band. It is not clear if the DTS EMC report (exhibit 6k) takes this into account and also provides bandedge compliance measurements for channel 10 operating at full power, in order to demonstrate the EUT's bandedge compliance for all channels/modes/output levels. Please clarify.

A: The European compliance tests include out-of-band emission test, which extends 40 MHz away from band edges. Those tests show, that the signal slopes down until it disappears permanently in noise at 25 MHz away from the band edge. Channel 10 is 5 MHz farther away from the band edge than channel 11. The effect in band edge test can be estimated by shifting the existing band edge graph 5 MHz inwards.

Channel 11 has 2 dB lower power than channel 10. Some additional conducted measurements were made to investigate the effect the increased power has on the skirts. It was found out, that the skirt raises about 7 dB when the output power raises 2 dB. At the upper band edge, the downward slope is about 1.6 dB / MHz. That gives $(-1.6 \text{ dB/MHz} * 5 \text{ MHz}) + 7 \text{ dB} = -1 \text{ dB}$. The band edge results on channel 10 would show 1 dB lower values than those on channel 11.

According to the FCC's definition, a device that uses active scanning is considered a master device. The response to question 8b states that active scanning is implemented in NII Bands 2a and 2c, but is turned off for other bands. Please clarify, as the opposite is true for most 5 GHz devices (a master device in Bands 2a and 2c would require full DFS capability).

Answer: We confirm that the devices has passive scanning and not active scanning. The answer to your question 8b was not correct concerning the type of scanning.