802.11ba Draft Specification

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| Proposed spec text TX and RX requirements | | | | |
| Date: 2018-05-07 | | | | |
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Abstract

This submission proposes spec text related to TX and RX requirements

Revision History:

* Rev 0: Text based on motion passed in the March f2f and May f2f

***Editing instructions formatted like this are intended to be copied into the TGba Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGba Editor: Editing instructions preceded by “TGba Editor” are instructions to the TGba editor to modify or insert material in the TGba draft. As a result of adopting the changes, the TGba editor will execute the instructions rather than copy them to the TGba Draft.***

* WUR transmit specification
  + - 1. Transmit spectrum mask

NOTE 1—In the presence of additional regulatory restrictions, the device has to meet both the regulatory requirements and the mask defined in this subclause.

NOTE 2—Transmit spectral mask figures in this subclause are not drawn to scale

NOTE 3—For rules regarding TX center frequency leakage levels, see 21.3.17.4.2. The spectral mask requirements in this subclause do not apply to the RF LO.

**TGba Editor: *Instruction*: *Add the following text***

Label1:

For operation using 20 MHz channel spacing, the transmitted spectrum shall have a 0 dBr (dB relative to the

maximum spectral density of the signal) bandwidth not exceeding 18 MHz, –20 dBr at 11 MHz frequency

offset, –28 dBr at 20 MHz frequency offset, and the maximum of –40 dBr and –53 dBm/MHz at 30 MHz

frequency offset and above. The transmitted spectral density of the transmitted signal shall fall within the

spectral mask, as shown in Figure 17-13 in 802.11-16.

* + - 1. Spectral flatness
      2. Transmit center frequency and symbol clock frequency tolerance

**TGba Editor: *Instruction Add the following text***

Label 2:

The symbol clock frequency and transmit center frequency tolerance shall be ±20 ppm maximum. The transmit center frequency and the symbol clock frequency for all transmit antennas and frequency segmentsshall be derived from the same reference oscillator.

* + - 1. Modulation accuracy
      2. Time of Departure accuracy

<Texts to be filled>

* WUR receiver specification

For tests in this subclause, the input levels are measured at the antenna connectors and are referenced as the average power per receive antenna.

**32.3.11.1 Receiver minimum input sensitivity**

**TGba Editor: *Instruction Add the following text***

Label 4

The packet error ratio (PER) shall be less than 10% for a WUR PSDU length of 6 octets with the rate-dependent input levels listed in Table 32-I.

Table 32-I - Receiver minimum input level sensitivity

|  |  |
| --- | --- |
| Modulation | Minimum sensitivity  (dBm) |
| WUR-LDR | -82 |
| WUR-HDR | -77 |

**32.3.11.2 Adjacent channel rejection**

**TGba Editor: *InstructionMake the text change indicated below related to ACR. The numbers in the table related to nonadjacent channel rejection refers to the instruction under Label 6***

Label 5

Adjacent channel rejection for shall be measured by setting the desired signal’s strength 3 dB above the rate dependent sensitivity specified in Table 32-I and raising the power of the interfering signal of 20 MHz bandwidth until 10% PER is caused for a WURPSDU length of 6 octets. The power difference between the interfering and desired channel is the corresponding adjacent channel rejection. The center frequency of the adjacent channel shall be placed 20 MHz away from the center frequency of the desired signal.

The interfering signal in the adjacent channel shall be a conformant OFDM signal, unsynchronized with the signal in the channel under test, and shall have a minimum duty cycle of 50%. For a conforming OFDM PHY, the corresponding rejection shall be no less than specified in Table 32-J.

Table 32-J - Minimum required adjacent and nonadjacent channel rejection levels

|  |  |  |
| --- | --- | --- |
| Modulation | Adjacent channel rejection (dB) | Nondjacent channel rejection (dB) |
| WUR-LDR | 16 | 32 |
| WUR-HDR | 11 | 27 |

**32.3.11.3 Nonadjacent channel rejection**

**TGba Editor: *Instruction Add the following text. Also add the corresponding entries in Table 32-J***

Label 6

Nondjacent channel rejection for shall be measured by setting the desired signal’s strength 3 dB above the rate dependent sensitivity specified in Table 32-I and raising the power of the interfering signal of 20 MHz bandwidth until 10% PER is caused for a WUR PSDU length of 6 octets. The power difference between the interfering and desired channel is the corresponding nonadjacent channel rejection. The center frequency of the nonadjacent channel shall be placed 40 MHz away from the center frequency of the desired signal.

The interfering signal in the nonadjacent channel shall be a conformant OFDM signal, unsynchronized with the signal in the channel under test, and shall have a minimum duty cycle of 50%. For a conforming OFDM PHY, the corresponding rejection shall be no less than specified in Table 32-J.

**32.3.11.4 Receiver maximum input level**

**TGba Editor: *Instruction Add the following text.***

Label 7

The receiver shall provide a maximum PER of 10% at a WUR PSDU length of 6 octets, for a maximum input level of -30 dBm in 5 GHz band and -20 dBm in 2.4 GHz band, measured at each antenna for any baseband WUR modulation.

**32.3.11.5 CCA sensitivity**

<Texts to be filled>