IEEE P802.11  
Wireless LANs

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | DSSS TX Power Ramp | | | | | | Date: 2025-9-9 | | | | | | Author(s): | | | | | | Name | Affiliation | Address | Phone | email | | Youhan Kim | Qualcomm Technologies, Inc. |  |  | [youhank@qti.qualcomm.com](mailto:youhank@qti.qualcomm.com) | | Srinivas Kandala | Samsung Electronics |  |  | [srini.k1@samsung.com](mailto:srini.k1@samsung.com) | | Sigurd Schelstraete | MaxLinear |  |  | [sschelstraete@maxlinear.com](mailto:sschelstraete@maxlinear.com) | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

Abstract

This submission proposes resolutions for the following comment(s) from LB289 on P802.11REVmf D1.0:

TBD

NOTE – Set the Track Changes Viewing Option in the MS Word to “All Markup” to clearly see the proposed text edits.

**Revision History:**

R0: Initial version

# CID TBD

|  |  |  |
| --- | --- | --- |
| **CID**  **Clause**  **Page.Line** | **Comment** | **Proposed Change** |
| TBD  15.4.5.8  3629.52 | The DSSS and DSSS/HR TX power ramp requirement did not take into consideration the instantaneous TX power fluctuation.  See <https://mentor.ieee.org/802.11/dcn/25/11-25-1325-00-000m-dsss-tx-power-ramp.pptx> | Change the reference for the 90% from maximum power to average power.  Commenter will submit a more detailed proposed solution. |

## Discussion

DSSS (Clause 15) and DSSS/HR (Clause 16) PHYs have the transmit power ramp up/down requirements – see 15.4.5.8 and 16.3.7.7. As discussed in <https://mentor.ieee.org/802.11/dcn/25/11-25-1325-00-000m-dsss-tx-power-ramp.pptx>, these requirements did not take into consideration the instantaneous TX power fluctuation, making it ambiguous for testing equipments to determine the correct time location to measure the TX power ramp up/down.

Two options to resolve this issue were proposed in <https://mentor.ieee.org/802.11/dcn/25/11-25-1325-00-000m-dsss-tx-power-ramp.pptx>. After offline discussion with many other members, it seems the option 2 (changing the reference from “maximum TX power” to “average TX power”) seems to be the most desirable direction.

## Proposed Resolution: CID TBD

**REVISED**

**Instruction to TGmf Editor:**

Implement the proposed text update for CID TBD in <https://mentor.ieee.org/802.11/dcn/25/11-25-1507-00-000m-dsss-tx-power-ramp.docx>

**Note to commenter:**

The proposed text update changes the reference from maximum TX power to average TX power as suggested by the commenter.

## Proposed Text Update: CID TBD

*Instruction to TGmf Editor: Update TGmf D1.0 P3629L54 as shown below.*

* Transmit power-on and power-down ramp

The transmit power-on ramp for 10% to 90% of average transmit power shall be no greater than 2 µs, where the average transmit power is measured over the entire PPDU duration. The transmit power-on ramp is shown in Figure 15-11 (Transmit power-on ramp).

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**Figure 15-11 – Transmit power-on ramp**

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The transmit power-down ramp for 90% to 10% of the average transmit power shall be no greater than 2 µs. The transmit power-down ramp is shown in Figure 15-12 (Transmit power-down ramp).

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**Figure 15-12 – Transmit power-down ramp**

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The transmit power ramps shall be constructed such that the DSSS PHY emissions comply with the spurious frequency product specification defined in 15.4.4.6 (Transmit and receive in-band and out-of-band spurious emissions).

*Instruction to TGmf Editor: Update TGmf D1.0 P3658L53 as shown below.*

* Transmit power-on and power-down ramp

The transmit power-on ramp for 10% to 90% of average transmit power shall be no greater than 2 ms, where the average transmit power is measured over the entire PPDU duration. The transmit power-on ramp is shown in Figure 16-9 (Transmit power-on ramp).

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**Figure 16-9 – Transmit power-on ramp**



The transmit power-down ramp for 90% to 10% of the average transmit power shall be no greater than 2 ms. The transmit power-down ramp is shown in Figure 16-10 (Transmit power-down ramp).

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**Figure 16-10 – Transmit power-down ramp**



The transmit power ramps shall be constructed such that the HR/DSSS PHY emissions comply with spurious frequency product specification defined in 16.3.6.7 (Transmit and receive in-band and out-of-band spurious emissions).

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