

# **5.4: A 5GHz CMOS Transceiver for IEEE 802.11a Wireless LAN**

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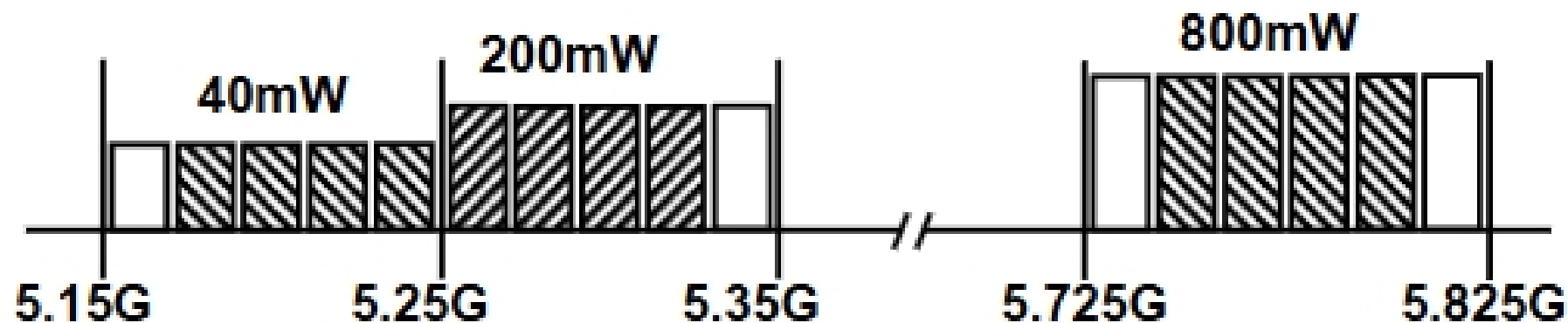
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# Outline

- ❑ **Introduction: 802.11a Wireless LAN**
- ❑ **Architecture**
- ❑ **Radio Design**
  - **Transmitter**
  - **Receiver**
  - **Frequency Synthesizer**
- ❑ **Summary**

# IEEE 802.11a WLAN

- Frequency: 5 GHz UNII (Unlicensed National Information Infrastructure)



- Total UNII Bandwidth: 300 MHz (> IEEE 802.11b)
- Modulation: OFDM  
(Orthogonal Frequency Division Multiplexing)  
+ BPSK / QPSK / 16QAM / 64QAM
- Data Rate: 6 - 54 Mbps