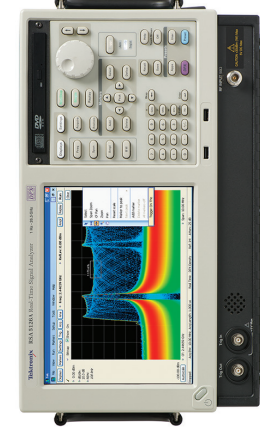


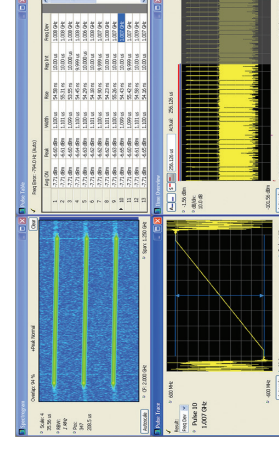
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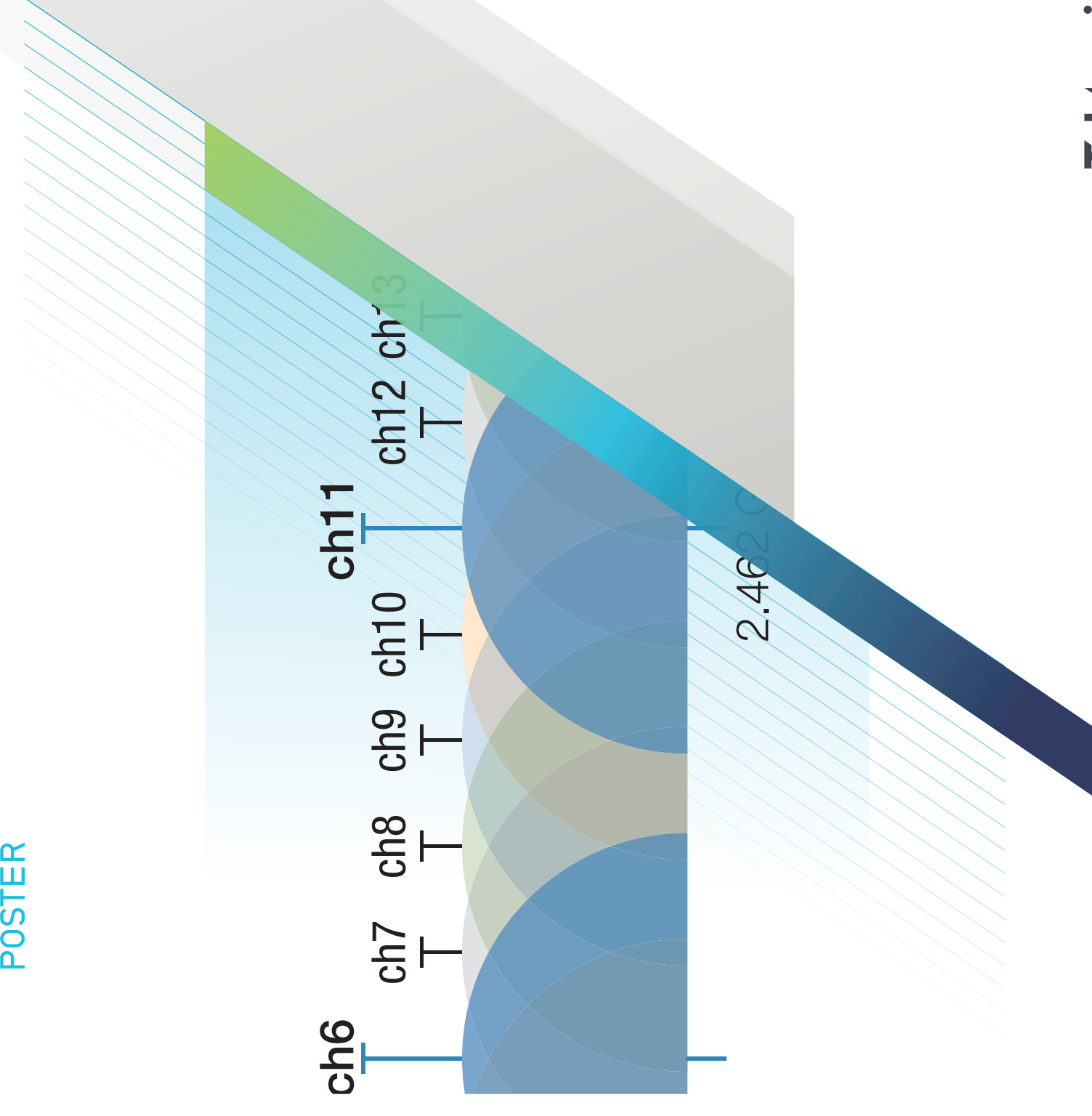
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# 802.11 Wi-Fi Physical Layer and Transmitter Measurements

POSTER



# 802.11 Wi-Fi Physical Layer and Transmitter Measurements

		802.11b (HR/DSSSS)	802.11a and 802.11g (ERP)	802.11n (HT)	802.11ac (VHT)	Channel # / Center Frequency																																																																																																																																																																																																																																																																																																													
Channel Allocation	2.4 GHz				<table border="1"> <thead> <tr> <th colspan="9">2.4 GHz</th> </tr> <tr> <th>Primary Channel</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th> </tr> <tr> <th>2nd Channel</th> <td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td> </tr> <tr> <th>Center Channel</th> <td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td> </tr> <tr> <th>Center Frequency</th> <td>2422</td><td>2427</td><td>2432</td><td>2437</td><td>2442</td><td>2442</td><td>2452</td><td>2457</td><td>2462</td> </tr> </thead> </table>	2.4 GHz									Primary Channel	1	2	3	4	5	6	7	8	9	2nd Channel	5	6	7	8	9	10	11	12	13	Center Channel	3	4	5	6	7	8	9	10	11	Center Frequency	2422	2427	2432	2437	2442	2442	2452	2457	2462	<table border="1"> <thead> <tr> <th colspan="10">802.11</th> </tr> <tr> <th>Bandwidth</th> <th>a</th> <th>n</th> <th>ac</th> <th>IEEE Channel Number</th> <th>36</th><th>40</th><th>44</th><th>48</th><th>52</th><th>56</th><th>60</th><th>64</th> <th>100</th><th>104</th><th>108</th><th>112</th><th>116</th><th>120</th><th>124</th><th>128</th><th>132</th><th>136</th><th>140</th> <th>149</th><th>153</th><th>157</th><th>161</th><th>165</th> </tr> </thead> <tbody> <tr> <td>20 MHz</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>40 MHz</td> <td></td> <td></td> <td>Yes</td> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>80 MHz</td> <td></td> <td></td> <td></td> <td>Yes</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>160 MHz</td> <td></td> <td></td> <td></td> <td>Yes</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>	802.11										Bandwidth	a	n	ac	IEEE Channel Number	36	40	44	48	52	56	60	64	100	104	108	112	116	120	124	128	132	136	140	149	153	157	161	165	20 MHz	Yes	Yes	Yes																										40 MHz			Yes																										80 MHz				Yes																									160 MHz				Yes																									<table border="1"> <thead> <tr> <th colspan="6">2.4 GHz</th> </tr> <tr> <th>Channel Number</th> <th>Center Frequency</th> <th>North America (FCC)</th> <th>Europe (ETSI)</th> <th>Japan</th> <th>ROW</th> </tr> </thead> <tbody> <tr><td>1</td><td>2412</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>2</td><td>2417</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>3</td><td>2422</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>4</td><td>2427</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>5</td><td>2432</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>6</td><td>2437</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>7</td><td>2442</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>8</td><td>2447</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>9</td><td>2452</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>10</td><td>2457</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>11</td><td>2462</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>12</td><td>2467</td><td>No</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>13</td><td>2472</td><td>No</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> <tr><td>14</td><td>2484</td><td>No</td><td>No</td><td>802.11b only</td><td>No</td></tr> </tbody> </table>	2.4 GHz						Channel Number	Center Frequency	North America (FCC)	Europe (ETSI)	Japan	ROW	1	2412	Yes	Yes	Yes	Yes	2	2417	Yes	Yes	Yes	Yes	3	2422	Yes	Yes	Yes	Yes	4	2427	Yes	Yes	Yes	Yes	5	2432	Yes	Yes	Yes	Yes	6	2437	Yes	Yes	Yes	Yes	7	2442	Yes	Yes	Yes	Yes	8	2447	Yes	Yes	Yes	Yes	9	2452	Yes	Yes	Yes	Yes	10	2457	Yes	Yes	Yes	Yes	11	2462	Yes	Yes	Yes	Yes	12	2467	No	Yes	Yes	Yes	13	2472	No	Yes	Yes	Yes	14	2484	No	No	802.11b only	No
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149	5745	Yes	SRD	No	Yes																																																																																																																																																																																																																																																																																																														
153	5765	Yes	SRD	No	Yes																																																																																																																																																																																																																																																																																																														
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Based on IEEE802.11-2012 standard.

DFS = Dynamic Frequency Selection  
 TPC = Transmit Power Control  
 SRD = Short Range Devices 25 mW max power