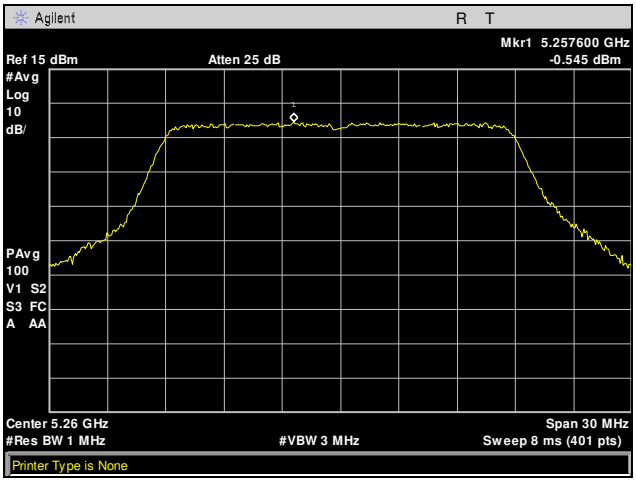
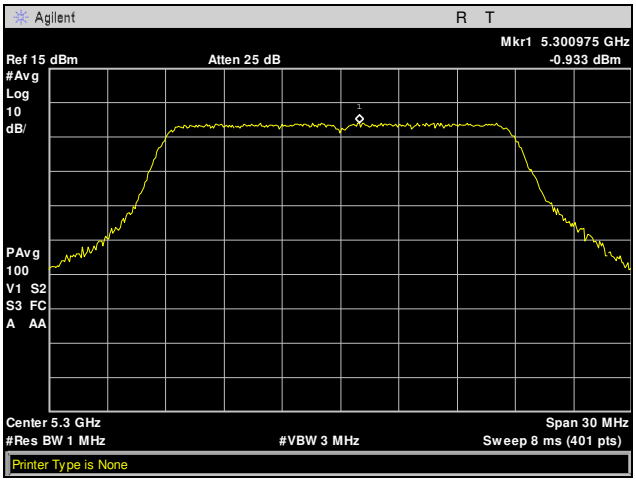
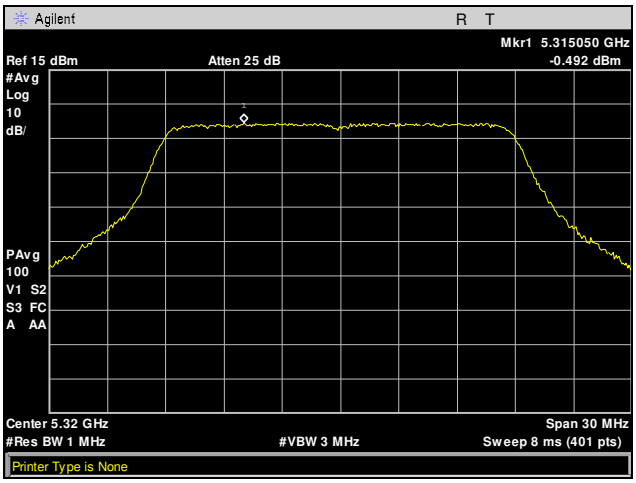
Power Spectral Density, 802.11n 20 MHz, Port 5, Radio 1, 8x8



Plot 963. Power Spectral Density, 802.11n 20 MHz, 5260 MHz, Port 5, Radio 1, 8x8



Plot 964. Power Spectral Density, 802.11n 20 MHz, 5300 MHz, Port 5, Radio 1, 8x8



Plot 965. Power Spectral Density, 802.11n 20 MHz, 5320 MHz, Port 5, Radio 1, 8x8

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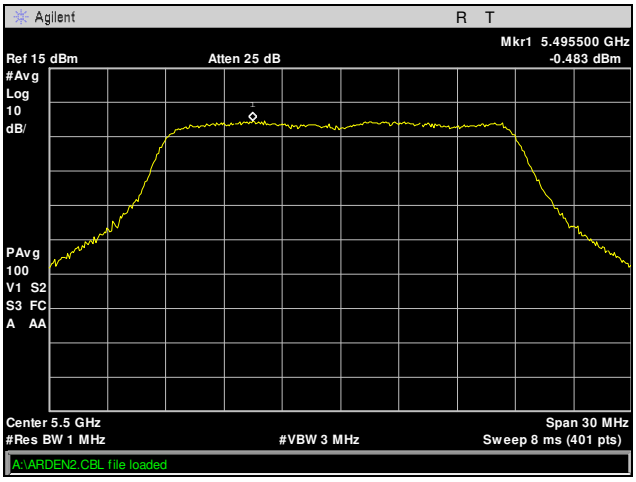
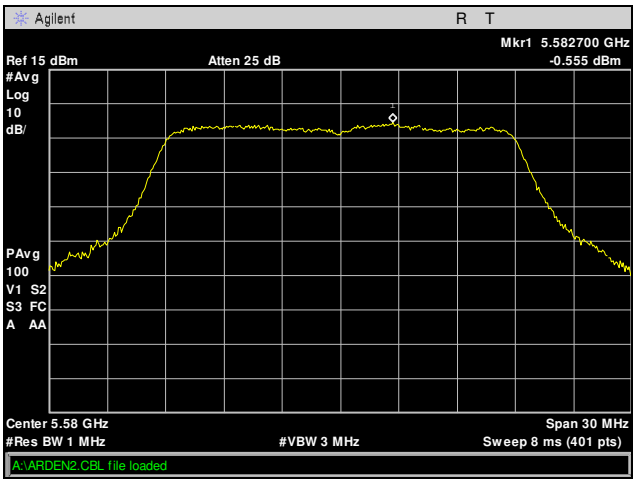
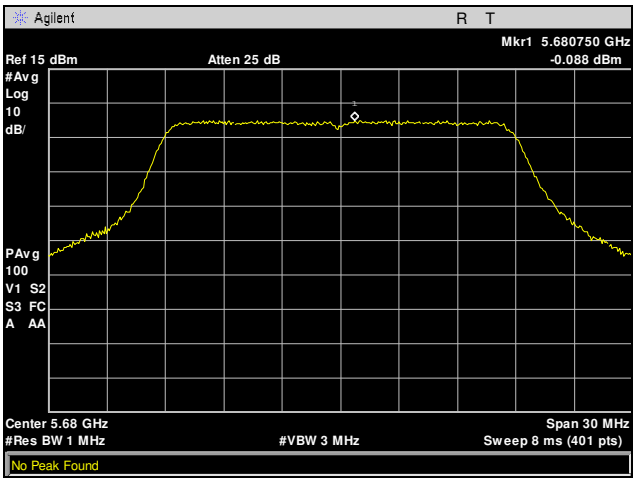


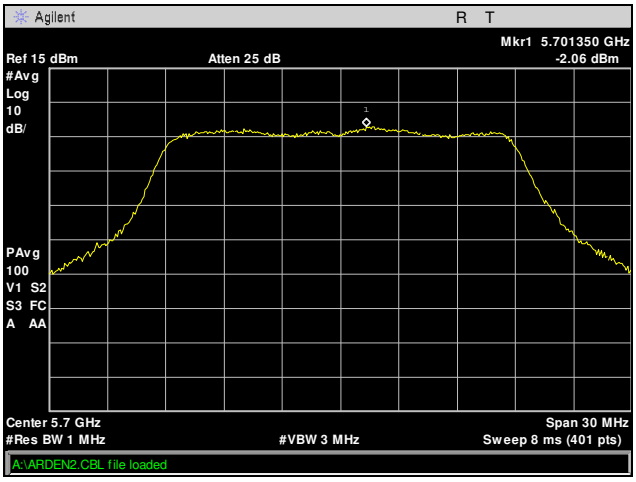
Plot 966. Power Spectral Density, 802.11n 20 MHz, 5500 MHz, Port 5, Radio 1, 8x8



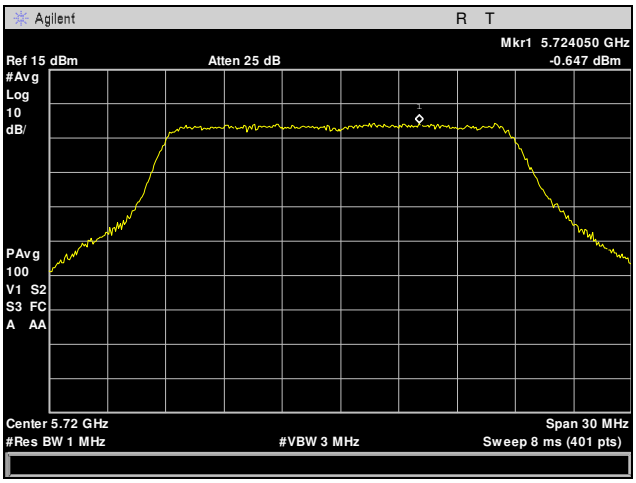
Plot 967. Power Spectral Density, 802.11n 20 MHz, 5580 MHz, Port 5, Radio 1, 8x8



Plot 968. Power Spectral Density, 802.11n 20 MHz, 5680 MHz, Port 5, Radio 1, 8x8

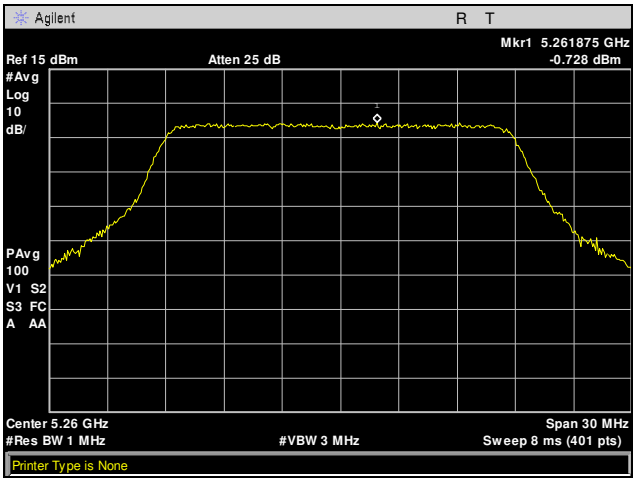


Plot 969. Power Spectral Density, 802.11n 20 MHz, 5700 MHz, Port 5, Radio 1, 8x8

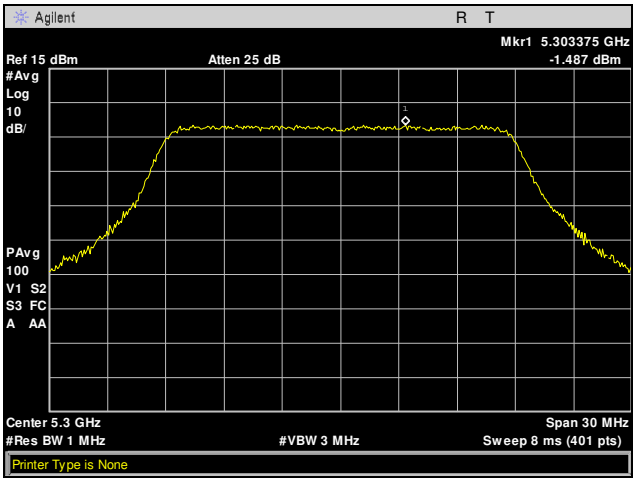


Plot 970. Power Spectral Density, 802.11n 20 MHz, 5720 MHz, Port 5, Radio 1, 8x8

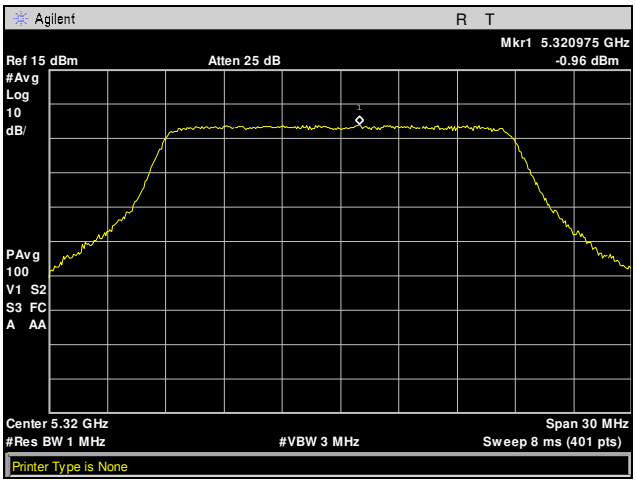
Power Spectral Density, 802.11n 20 MHz, Port 6, Radio 1, 8x8



Plot 971. Power Spectral Density, 802.11n 20 MHz, 5260 MHz, Port 6, Radio 1, 8x8



Plot 972. Power Spectral Density, 802.11n 20 MHz, 5300 MHz, Port 6, Radio 1, 8x8



Plot 973. Power Spectral Density, 802.11n 20 MHz, 5320 MHz, Port 6, Radio 1, 8x8

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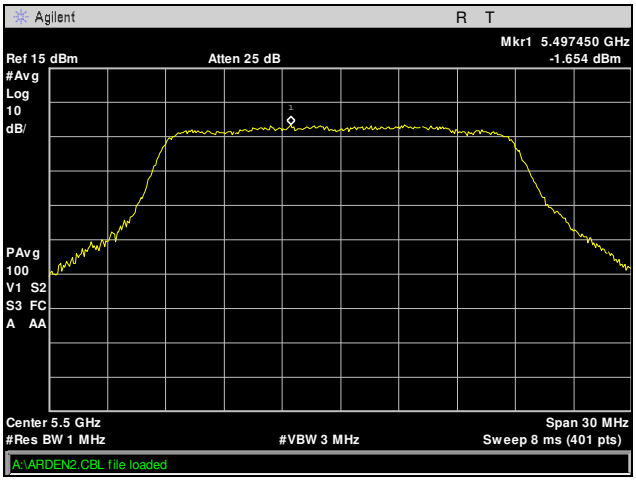
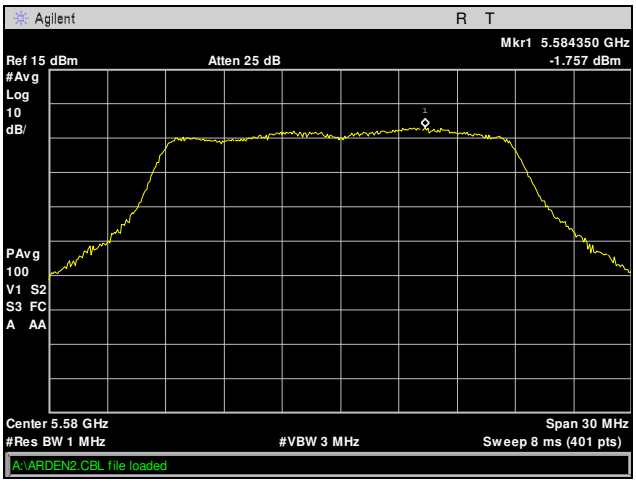
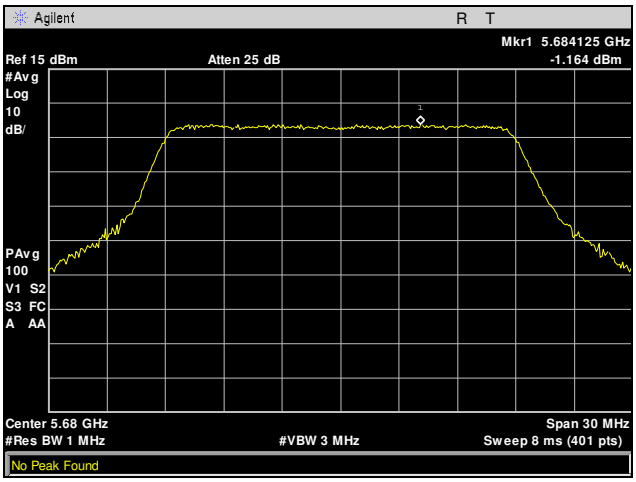


Plot 974. Power Spectral Density, 802.11n 20 MHz, 5500 MHz, Port 6, Radio 1, 8x8



Plot 975. Power Spectral Density, 802.11n 20 MHz, 5580 MHz, Port 6, Radio 1, 8x8



Plot 976. Power Spectral Density, 802.11n 20 MHz, 5680 MHz, Port 6, Radio 1, 8x8

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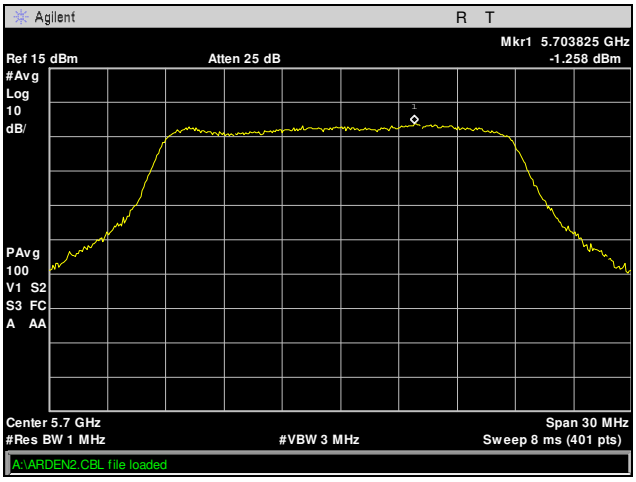
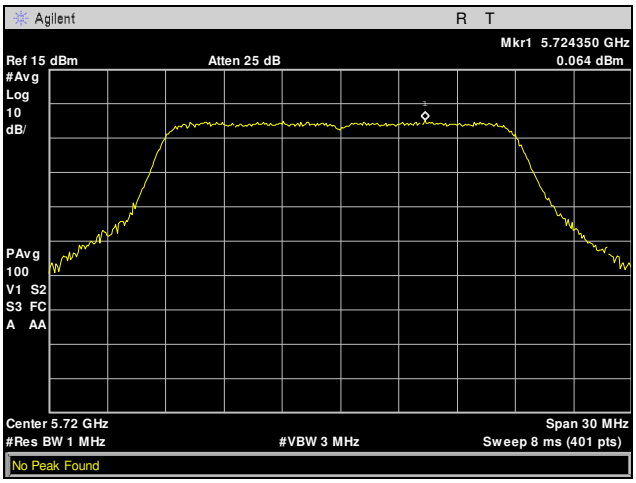
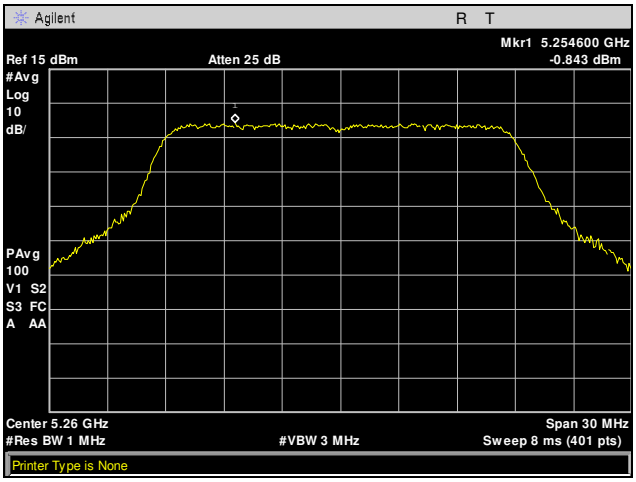


Plot 977. Power Spectral Density, 802.11n 20 MHz, 5700 MHz, Port 6, Radio 1, 8x8

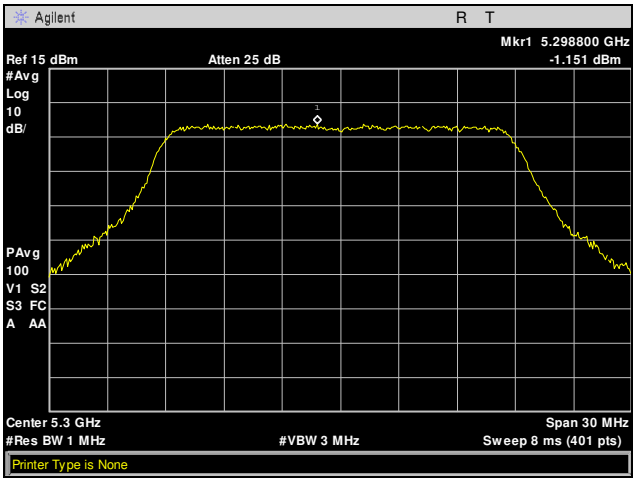


Plot 978. Power Spectral Density, 802.11n 20 MHz, 5720 MHz, Port 6, Radio 1, 8x8

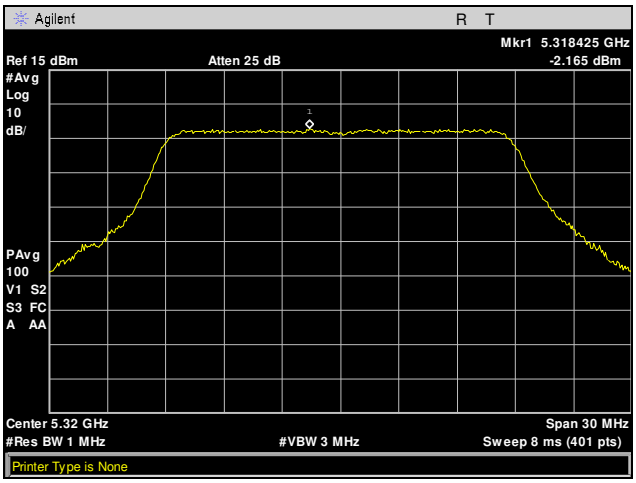
Power Spectral Density, 802.11n 20 MHz, Port 7, Radio 1, 8x8



Plot 979. Power Spectral Density, 802.11n 20 MHz, 5260 MHz, Port 7, Radio 1, 8x8



Plot 980. Power Spectral Density, 802.11n 20 MHz, 5300 MHz, Port 7, Radio 1, 8x8



Plot 981. Power Spectral Density, 802.11n 20 MHz, 5320 MHz, Port 7, Radio 1, 8x8

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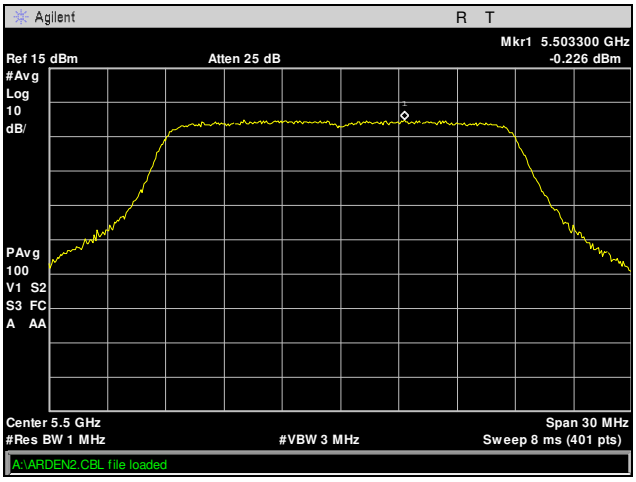
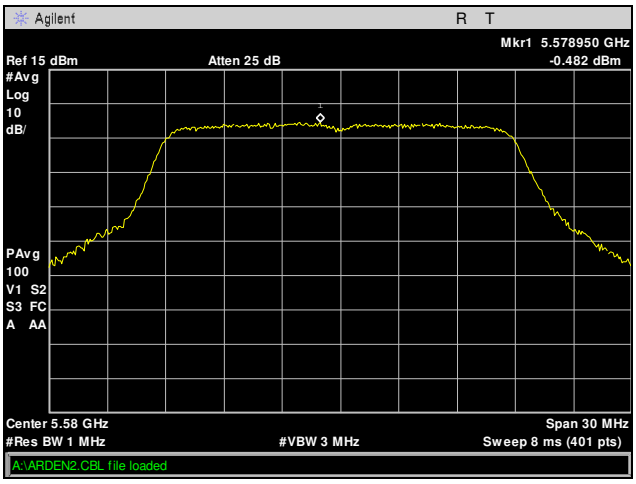
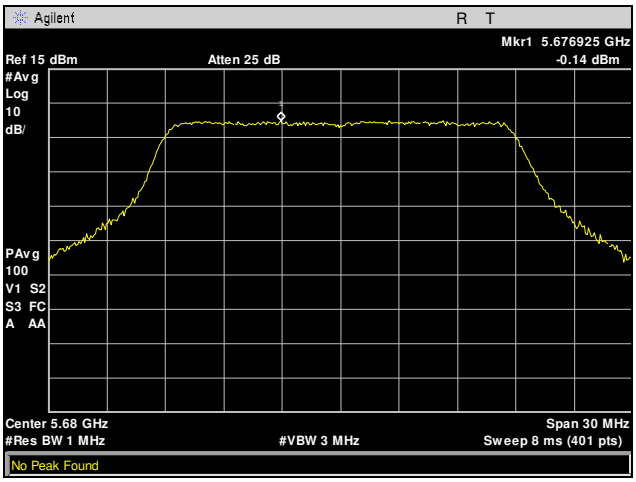


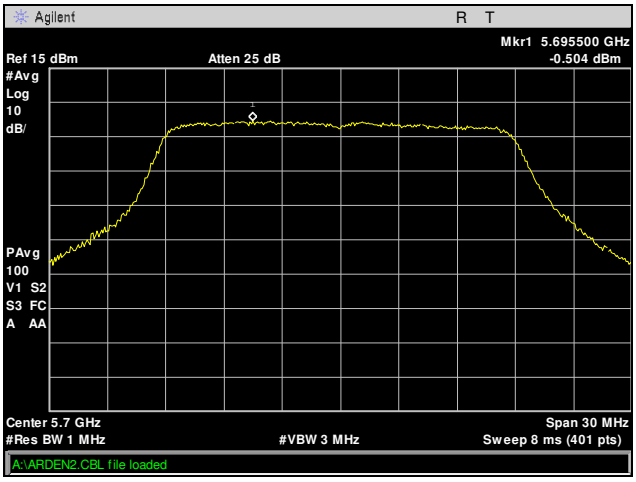
Plot 982. Power Spectral Density, 802.11n 20 MHz, 5500 MHz, Port 7, Radio 1, 8x8



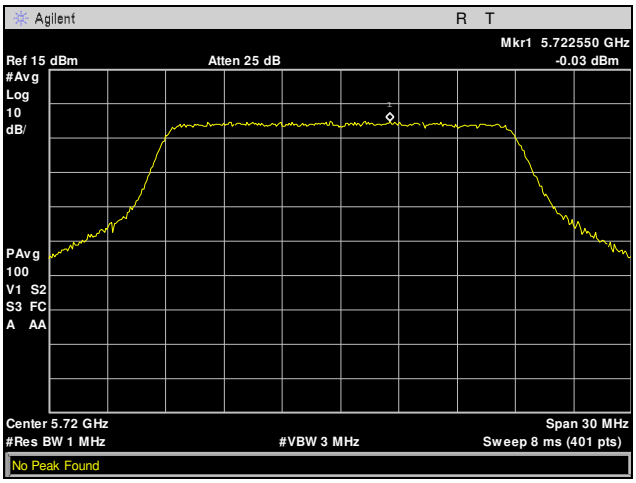
Plot 983. Power Spectral Density, 802.11n 20 MHz, 5580 MHz, Port 7, Radio 1, 8x8



Plot 984. Power Spectral Density, 802.11n 20 MHz, 5680 MHz, Port 7, Radio 1, 8x8



Plot 985. Power Spectral Density, 802.11n 20 MHz, 5700 MHz, Port 7, Radio 1, 8x8



Plot 986. Power Spectral Density, 802.11n 20 MHz, 5720 MHz, Port 7, Radio 1, 8x8

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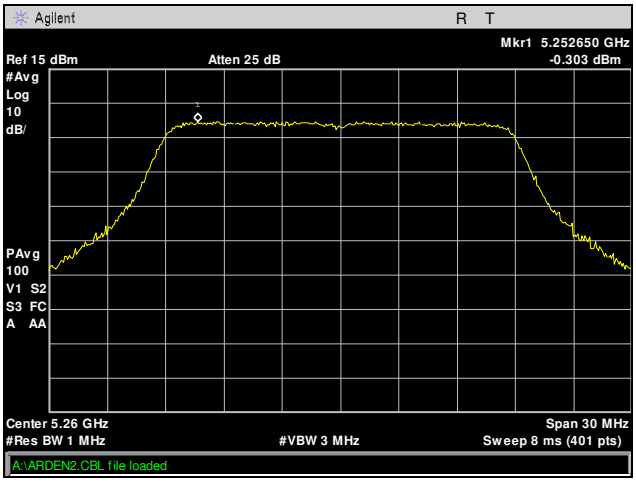
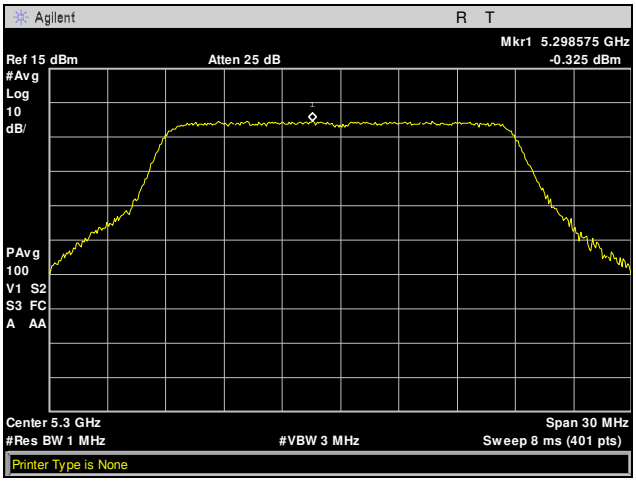
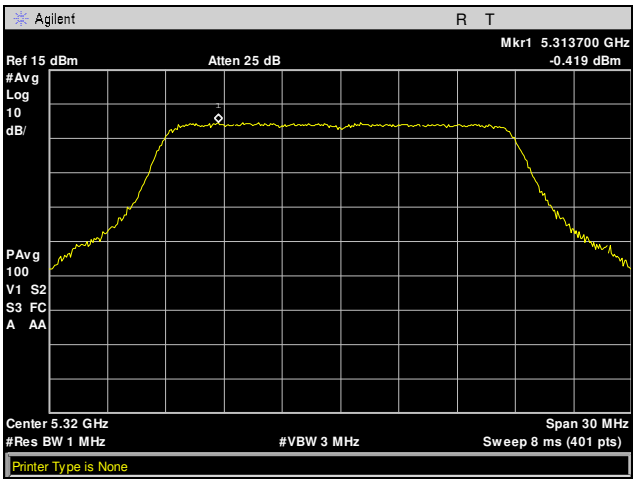
Power Spectral Density, 802.11n 20 MHz, Port 8, Radio 1, 8x8



Plot 987. Power Spectral Density, 802.11n 20 MHz, 5260 MHz, Port 8, Radio 1, 8x8



Plot 988. Power Spectral Density, 802.11n 20 MHz, 5300 MHz, Port 8, Radio 1, 8x8



Plot 989. Power Spectral Density, 802.11n 20 MHz, 5320 MHz, Port 8, Radio 1, 8x8

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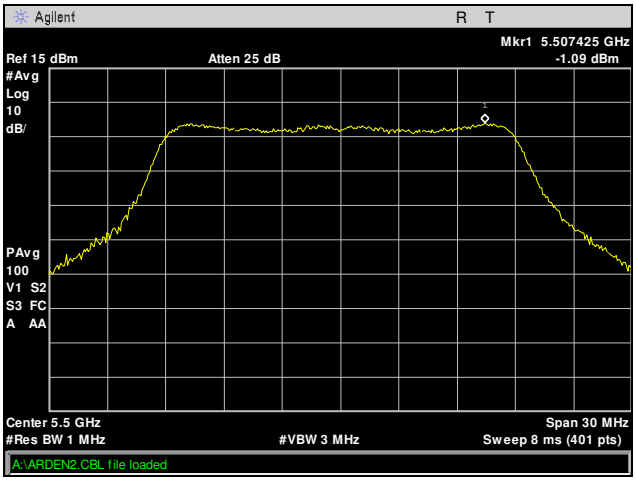
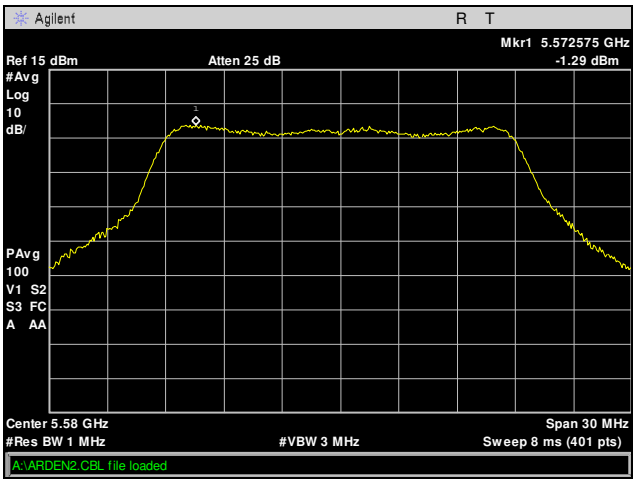
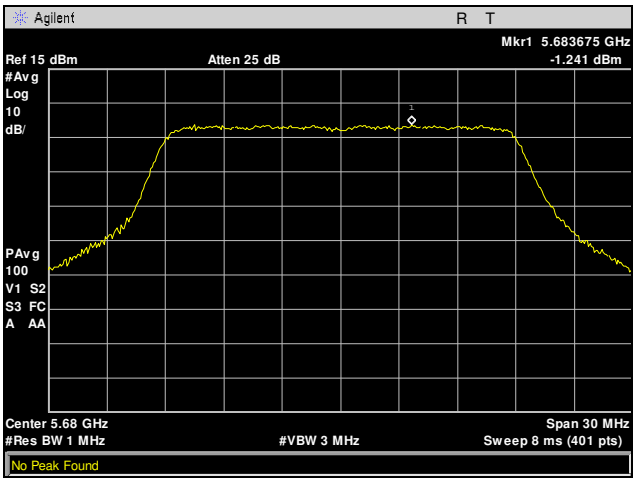


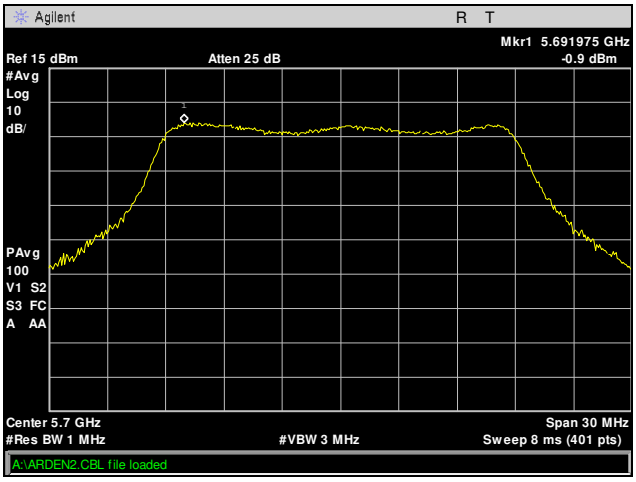
Plot 990. Power Spectral Density, 802.11n 20 MHz, 5500 MHz, Port 8, Radio 1, 8x8



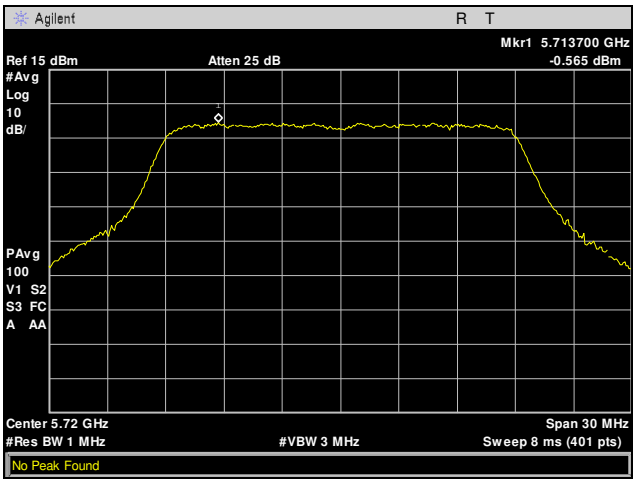
Plot 991. Power Spectral Density, 802.11n 20 MHz, 5580 MHz, Port 8, Radio 1, 8x8



Plot 992. Power Spectral Density, 802.11n 20 MHz, 5680 MHz, Port 8, Radio 1, 8x8

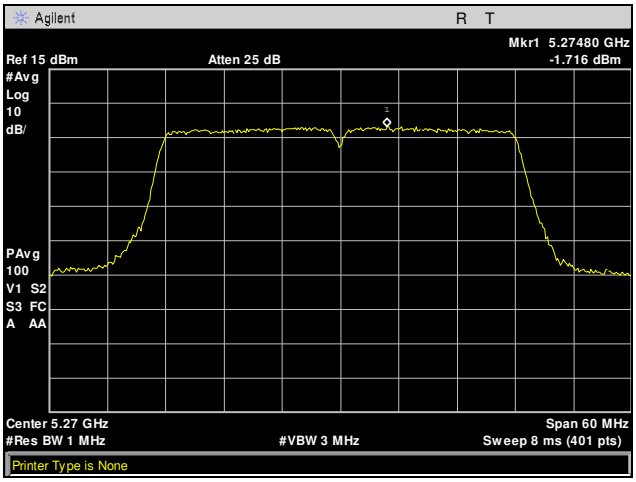


Plot 993. Power Spectral Density, 802.11n 20 MHz, 5700 MHz, Port 8, Radio 1, 8x8

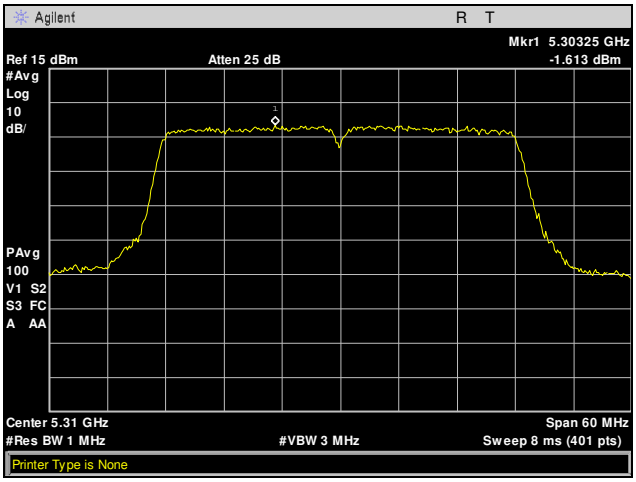


Plot 994. Power Spectral Density, 802.11n 20 MHz, 5720 MHz, Port 8, Radio 1, 8x8

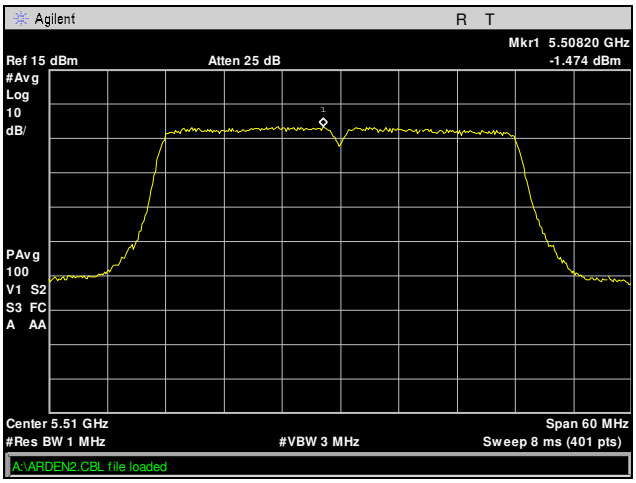
Power Spectral Density, 802.11n 40 MHz, Port 1, Radio 0, 8x8



Plot 995. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 1, Radio 0, 8x8



Plot 996. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 1, Radio 0, 8x8



Plot 997. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 1, Radio 0, 8x8

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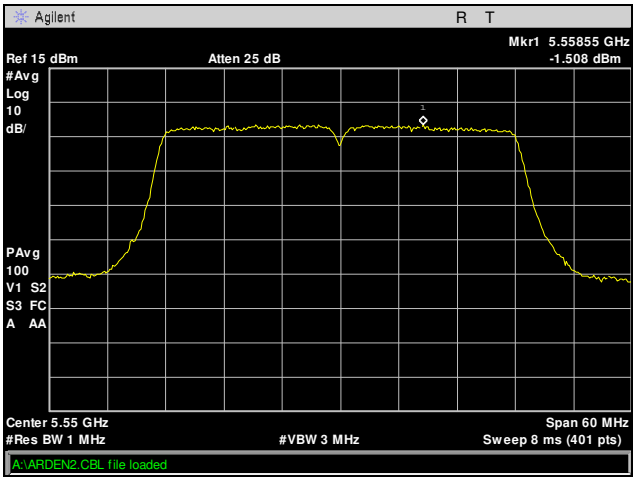
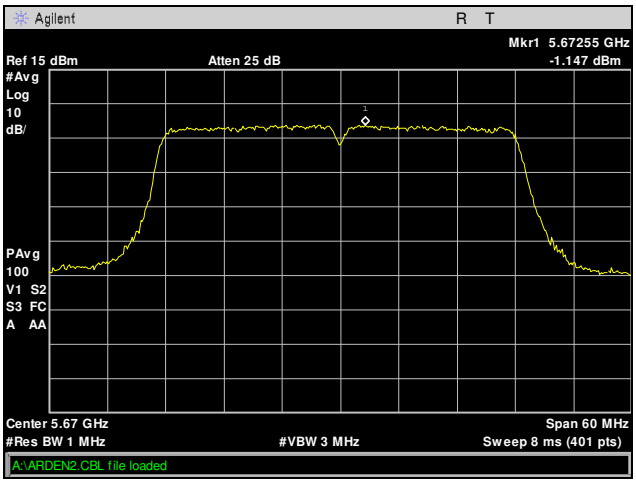
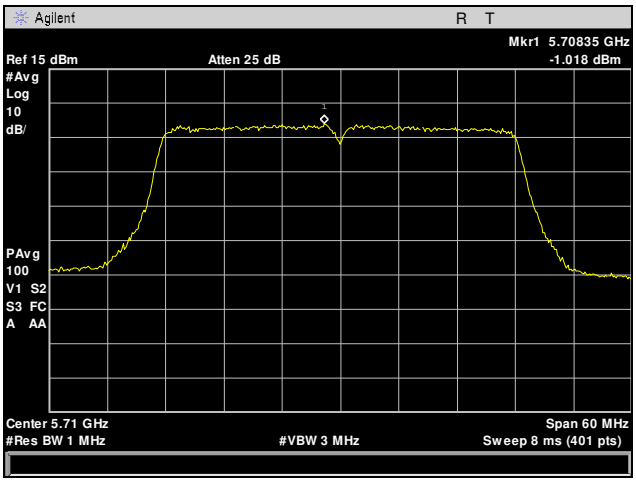


Plot 998. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 1, Radio 0, 8x8

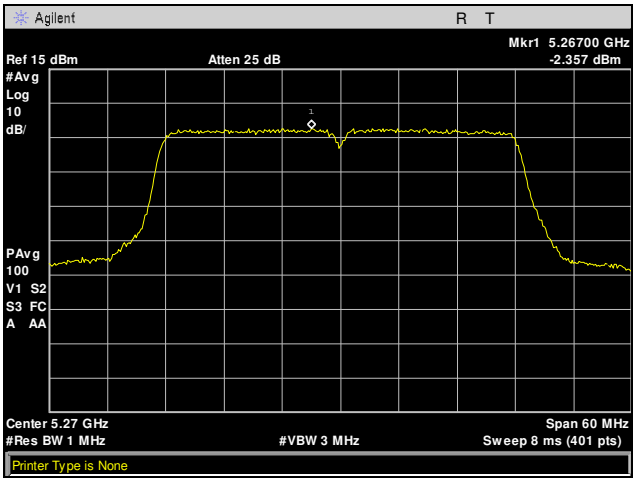


Plot 999. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 1, Radio 0, 8x8

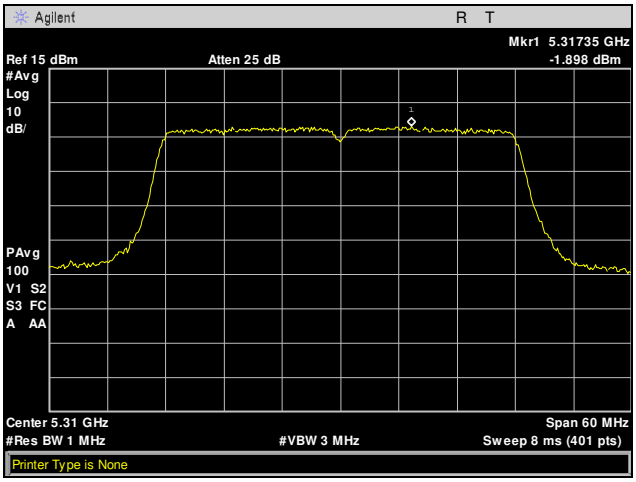


Plot 1000. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 1, Radio 0, 8x8

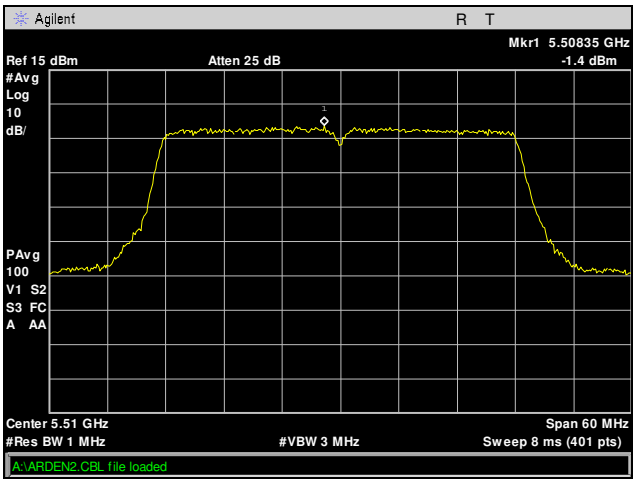
Power Spectral Density, 802.11n 40 MHz, Port 2, Radio 0, 8x8



Plot 1001. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 2, Radio 0, 8x8



Plot 1002. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 2, Radio 0, 8x8



Plot 1003. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 2, Radio 0, 8x8

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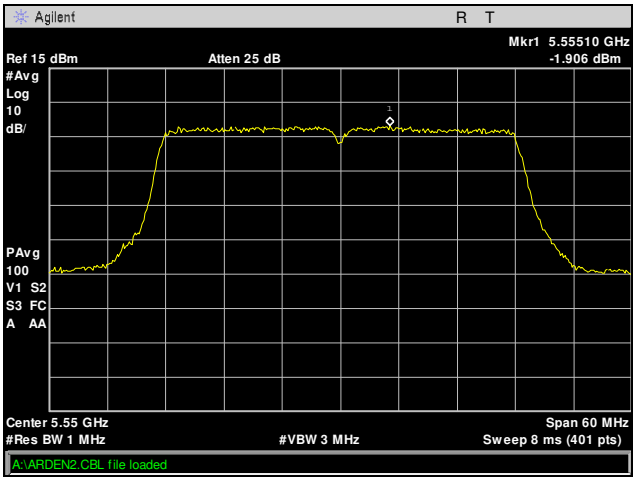
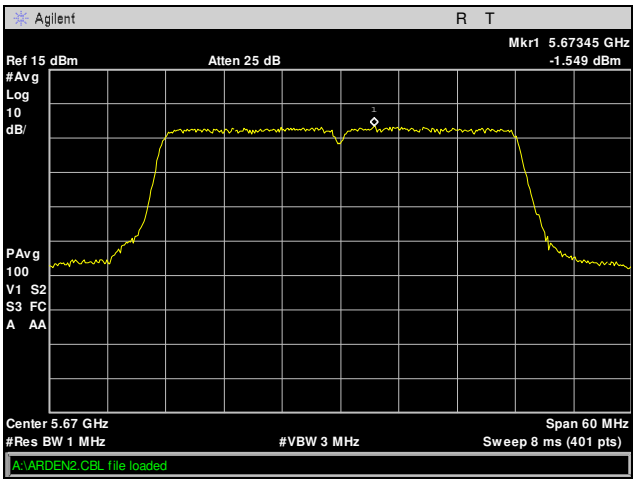
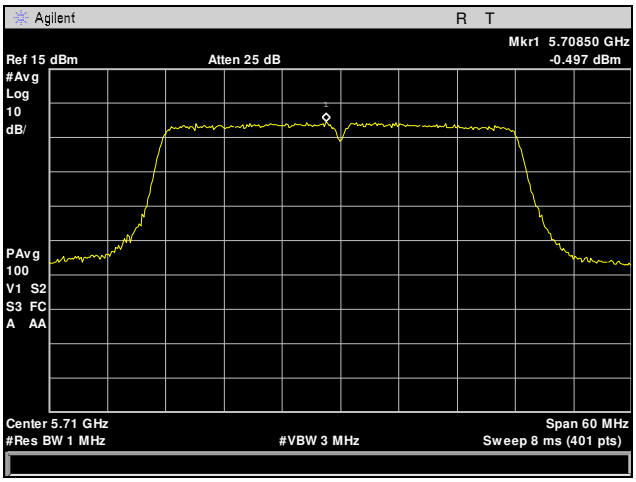


Plot 1004. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 2, Radio 0, 8x8

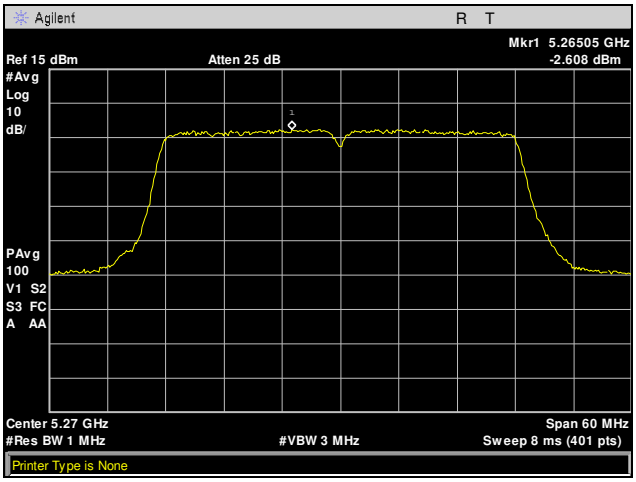


Plot 1005. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 2, Radio 0, 8x8

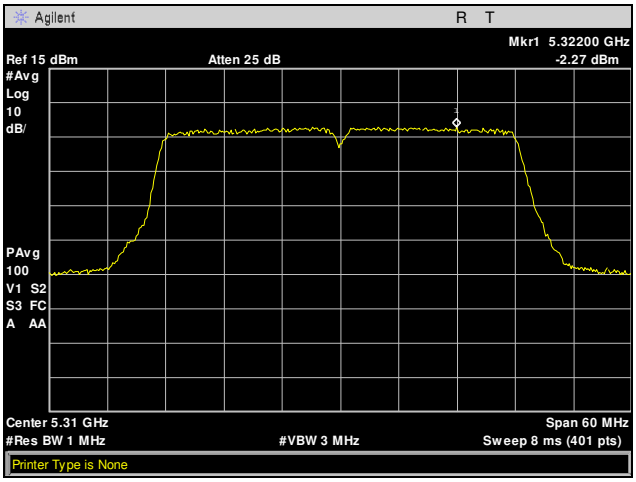


Plot 1006. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 2, Radio 0, 8x8

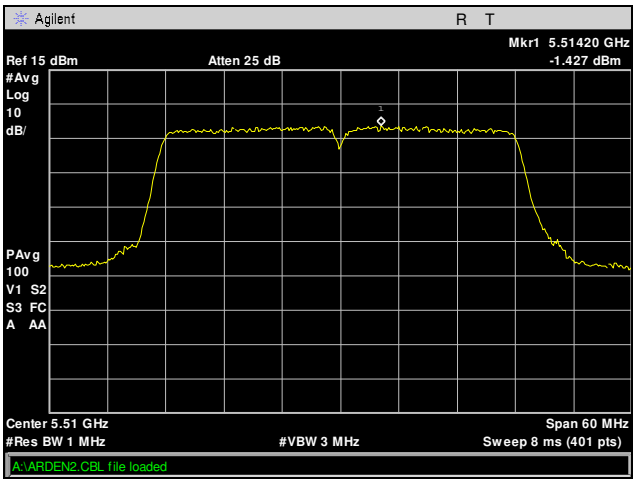
Power Spectral Density, 802.11n 40 MHz, Port 3, Radio 0, 8x8



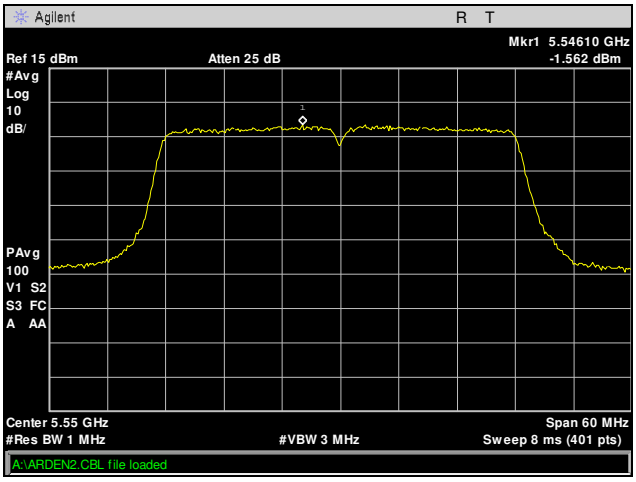
Plot 1007. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 3, Radio 0, 8x8



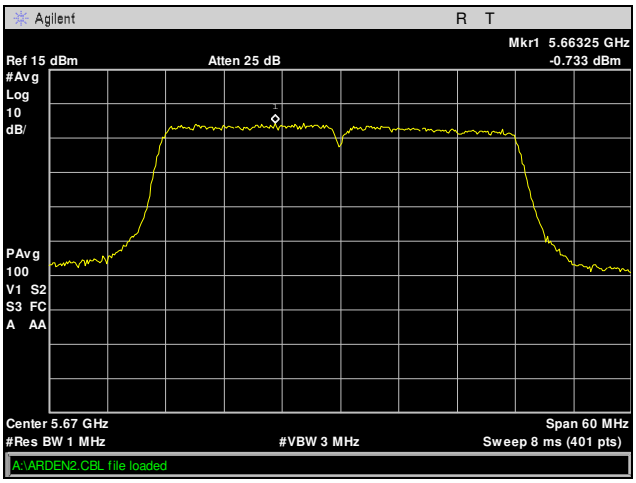
Plot 1008. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 3, Radio 0, 8x8



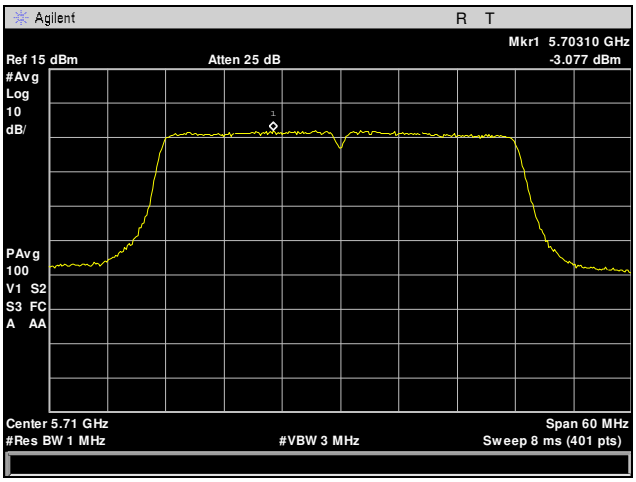
Plot 1009. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 3, Radio 0, 8x8



Plot 1010. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 3, Radio 0, 8x8



Plot 1011. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 3, Radio 0, 8x8



Plot 1012. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 3, Radio 0, 8x8

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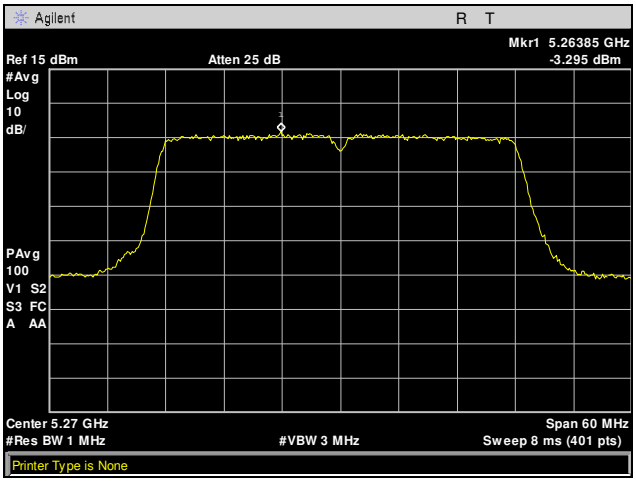
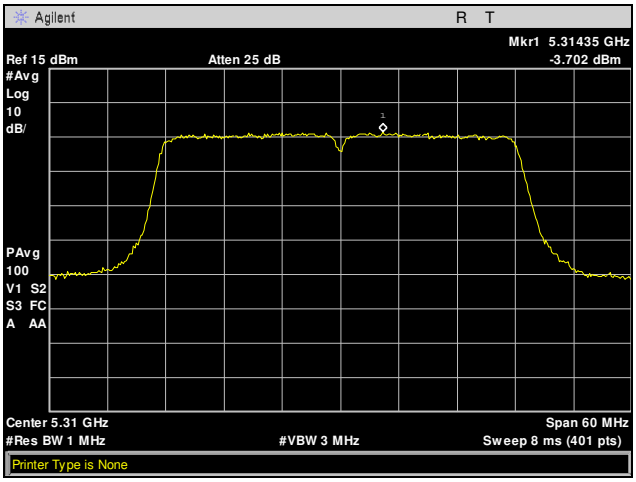
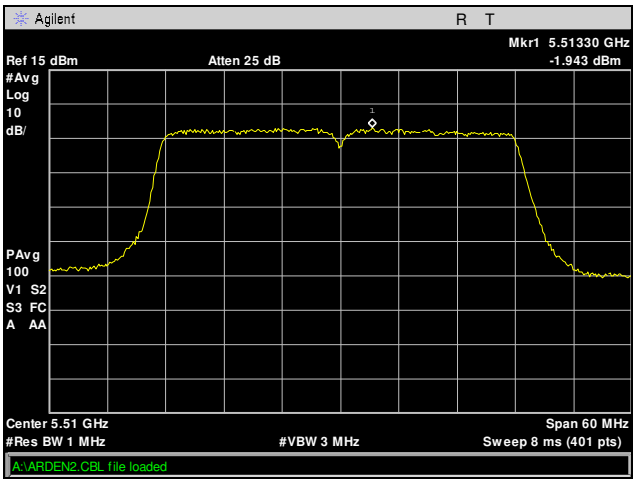
Power Spectral Density, 802.11n 40 MHz, Port 4, Radio 0, 8x8



Plot 1013. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 4, Radio 0, 8x8



Plot 1014. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 4, Radio 0, 8x8



Plot 1015. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 4, Radio 0, 8x8

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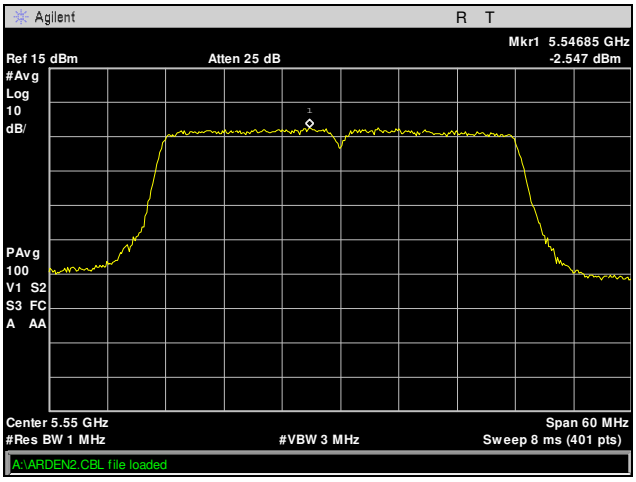
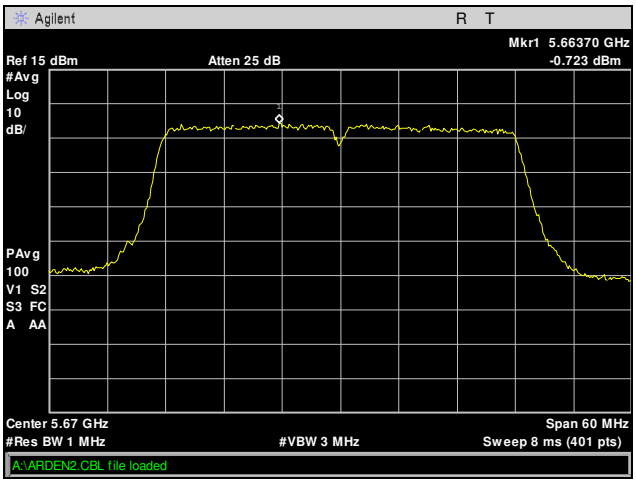
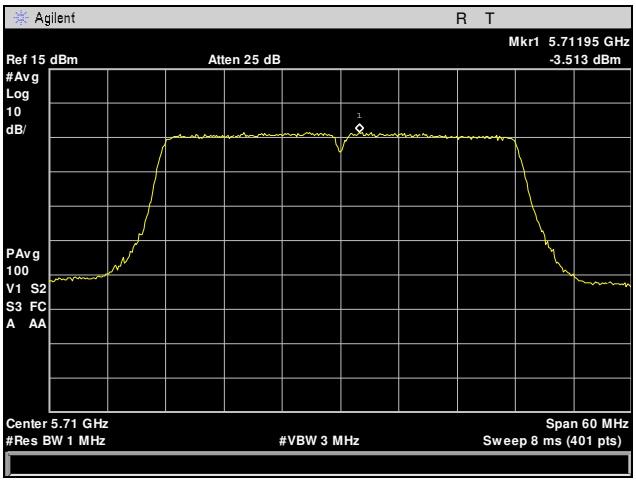


Plot 1016. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 4, Radio 0, 8x8

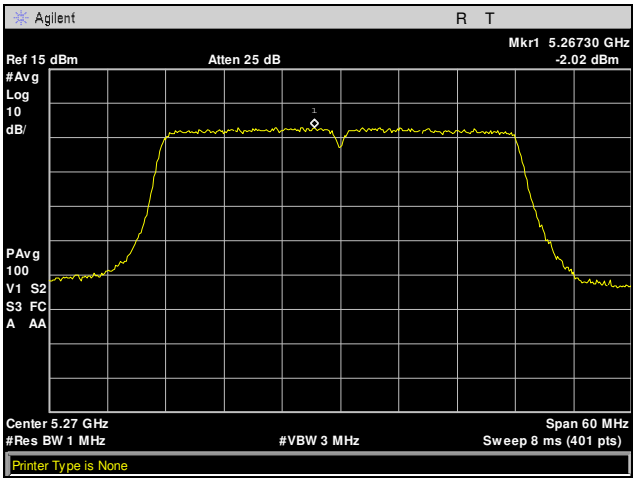


Plot 1017. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 4, Radio 0, 8x8

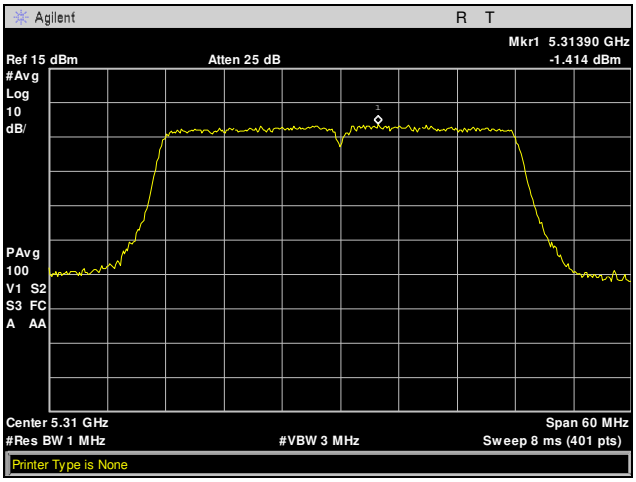


Plot 1018. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 4, Radio 0, 8x8

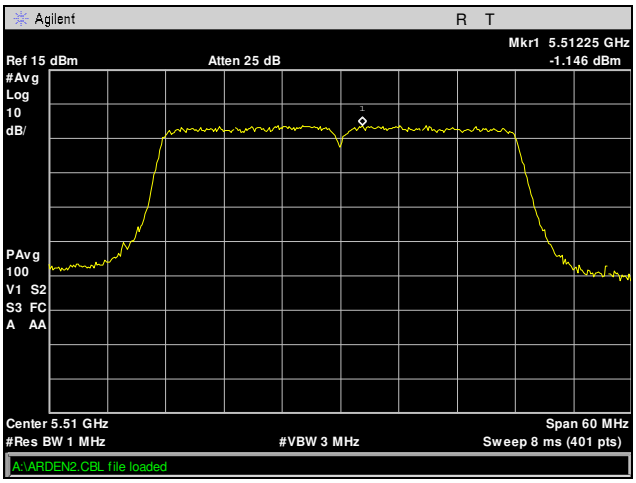
Power Spectral Density, 802.11n 40 MHz, Port 5, Radio 1, 8x8



Plot 1019. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 5, Radio 1, 8x8



Plot 1020. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 5, Radio 1, 8x8



Plot 1021. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 5, Radio 1, 8x8

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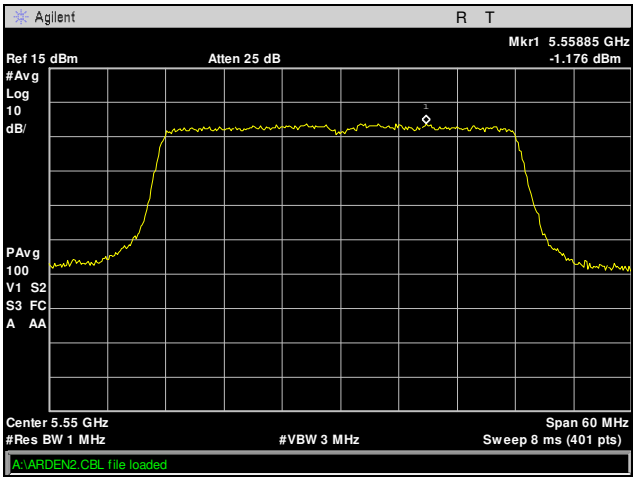
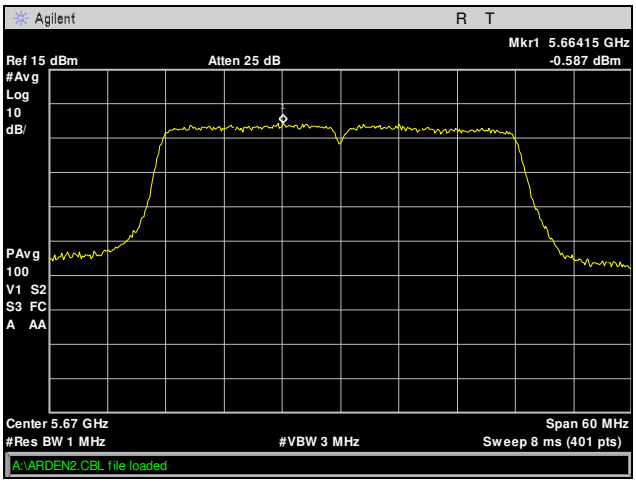
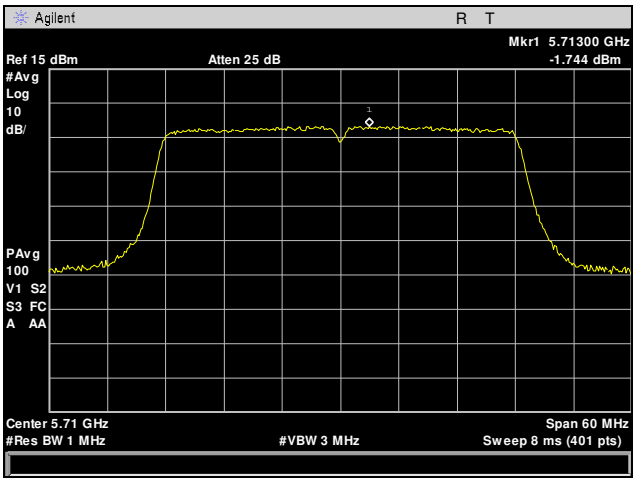


Plot 1022. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 5, Radio 1, 8x8

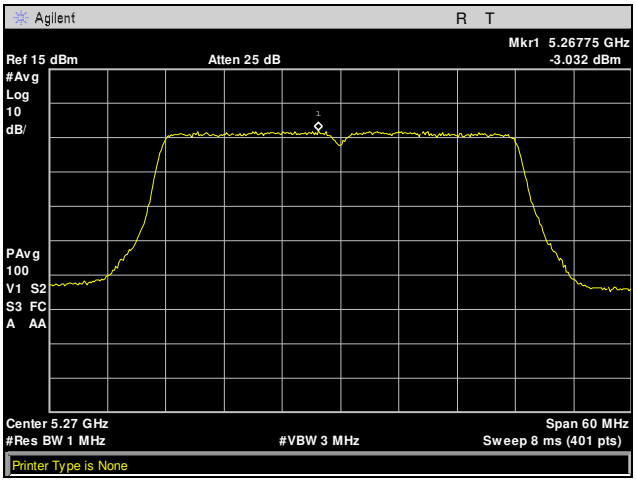


Plot 1023. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 5, Radio 1, 8x8

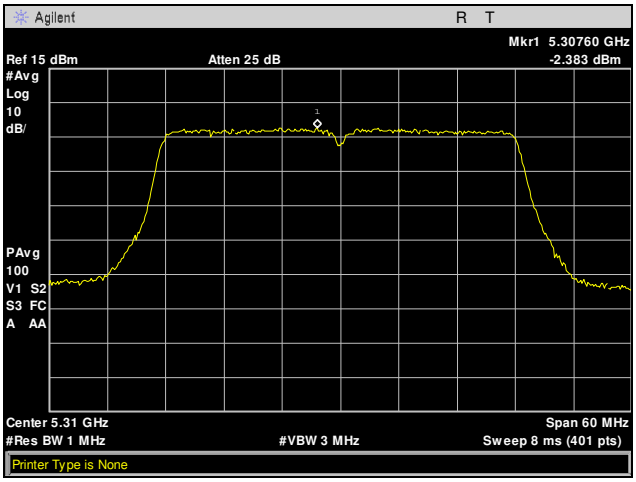


Plot 1024. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 5, Radio 1, 8x8

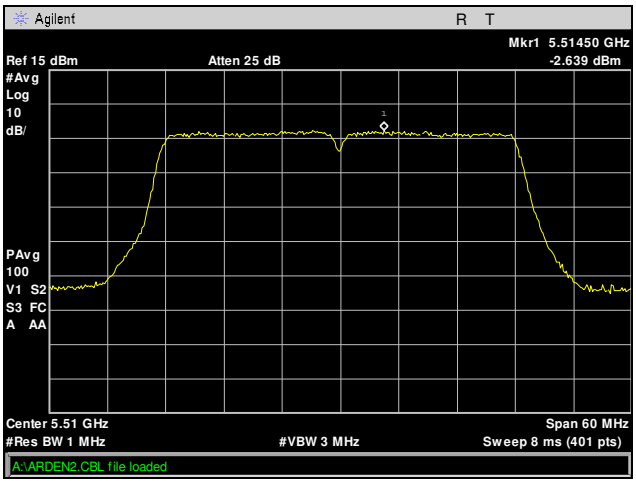
Power Spectral Density, 802.11n 40 MHz, Port 6, Radio 1, 8x8



Plot 1025. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 6, Radio 1, 8x8



Plot 1026. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 6, Radio 1, 8x8



Plot 1027. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 6, Radio 1, 8x8

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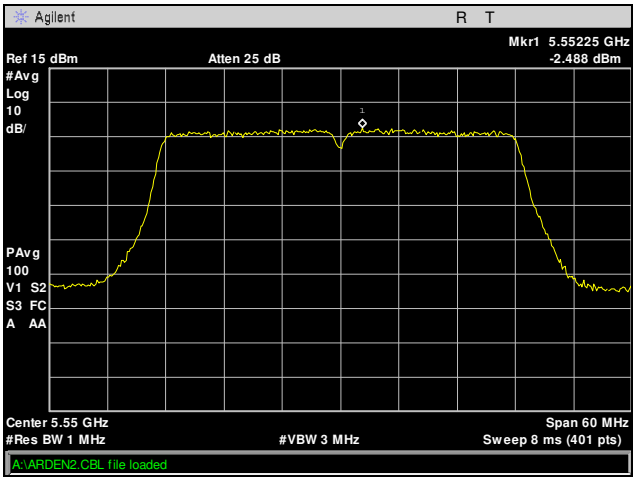
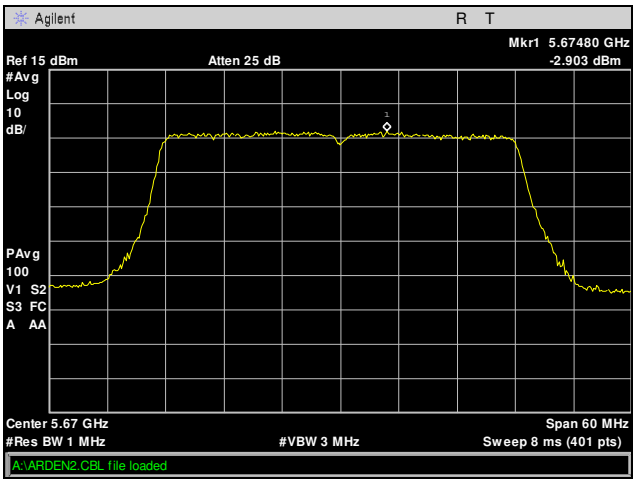
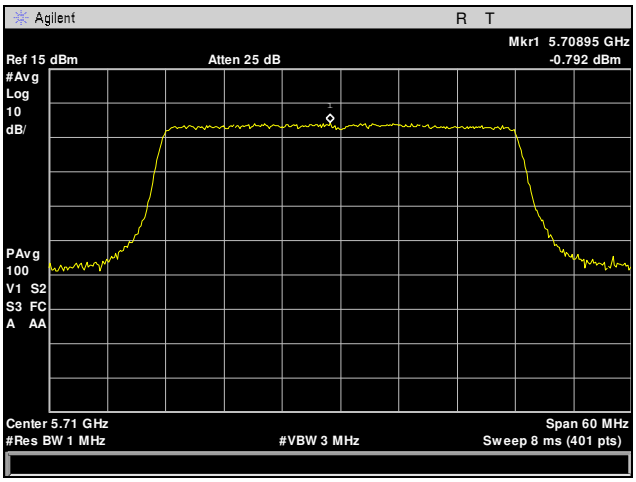


Plot 1028. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 6, Radio 1, 8x8

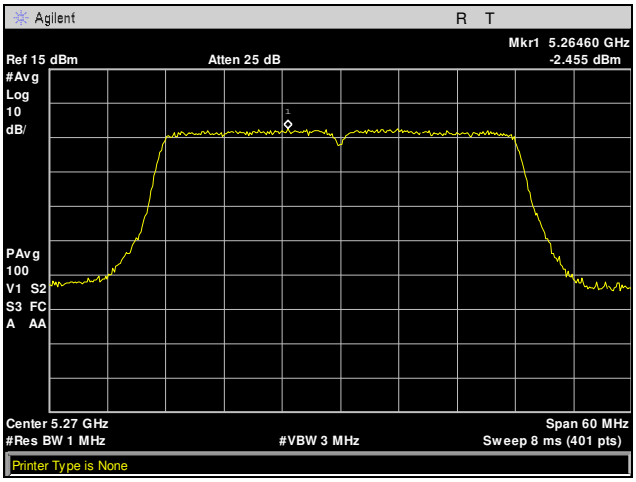


Plot 1029. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 6, Radio 1, 8x8

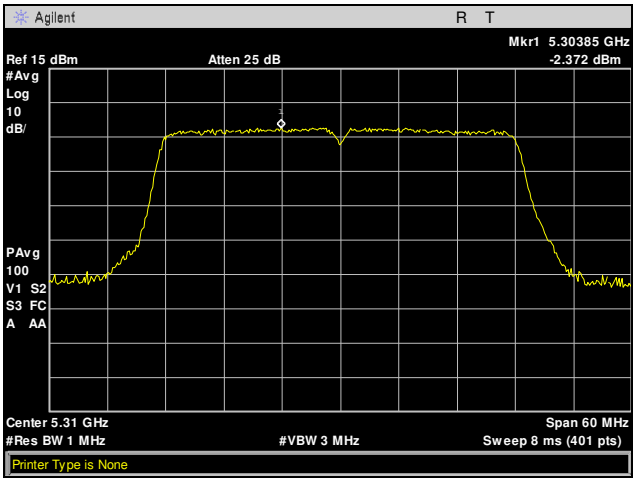


Plot 1030. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 6, Radio 1, 8x8

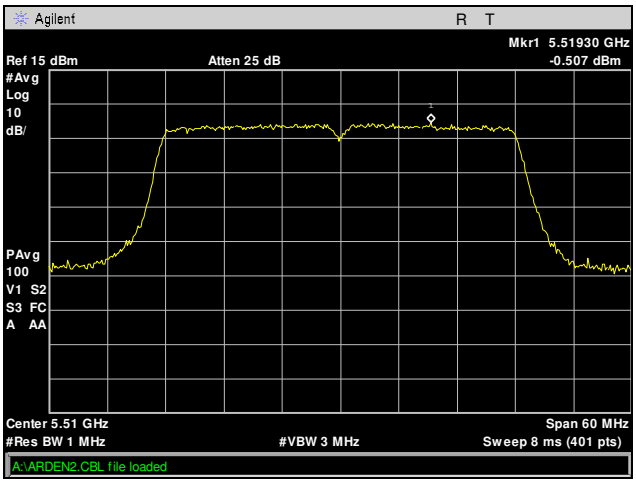
Power Spectral Density, 802.11n 40 MHz, Port 7, Radio 1, 8x8



Plot 1031. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 7, Radio 1, 8x8



Plot 1032. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 7, Radio 1, 8x8



Plot 1033. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 7, Radio 1, 8x8

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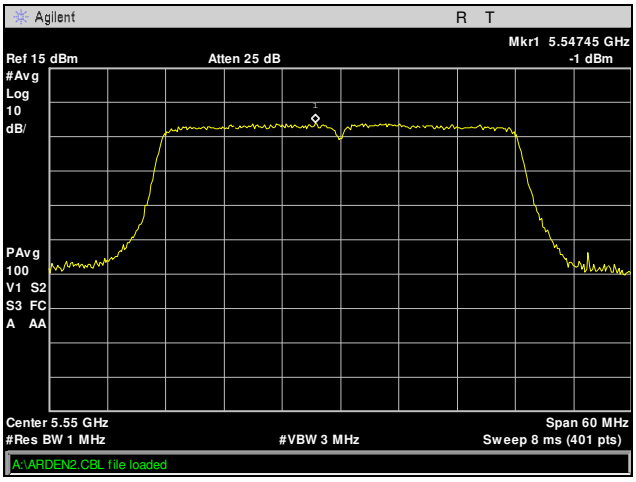
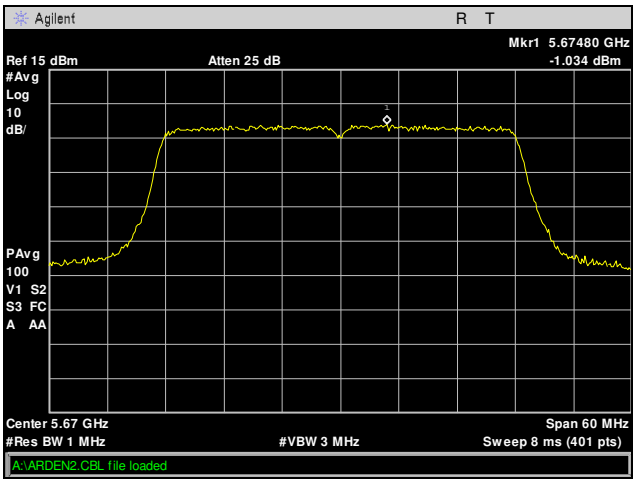
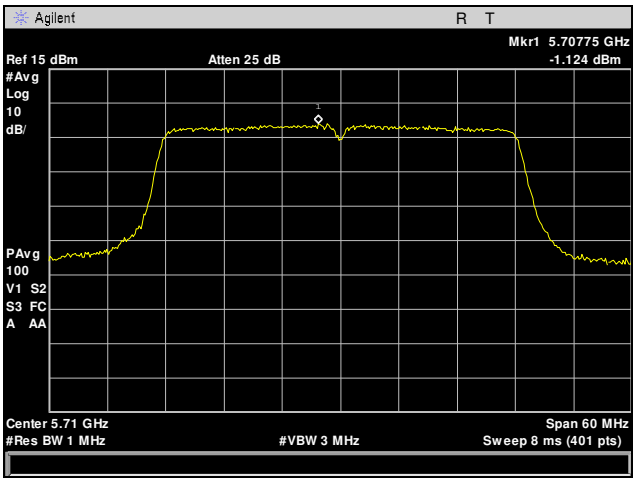


Plot 1034. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 7, Radio 1, 8x8

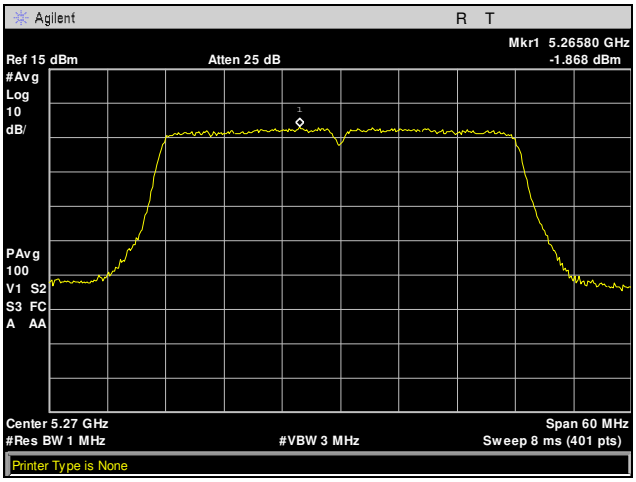


Plot 1035. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 7, Radio 1, 8x8

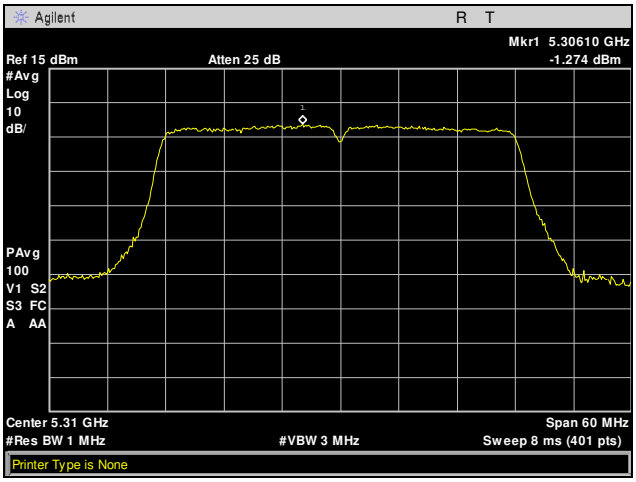


Plot 1036. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 7, Radio 1, 8x8

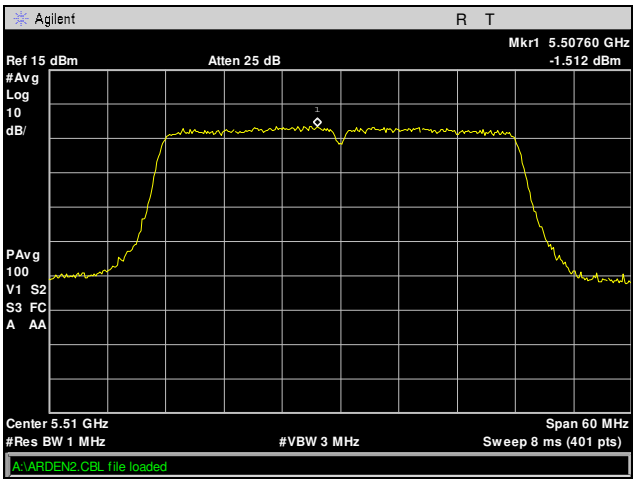
Power Spectral Density, 802.11n 40 MHz, Port 8, Radio 1, 8x8



Plot 1037. Power Spectral Density, 802.11n 40 MHz, 5270 MHz, Port 8, Radio 1, 8x8



Plot 1038. Power Spectral Density, 802.11n 40 MHz, 5310 MHz, Port 8, Radio 1, 8x8



Plot 1039. Power Spectral Density, 802.11n 40 MHz, 5510 MHz, Port 8, Radio 1, 8x8

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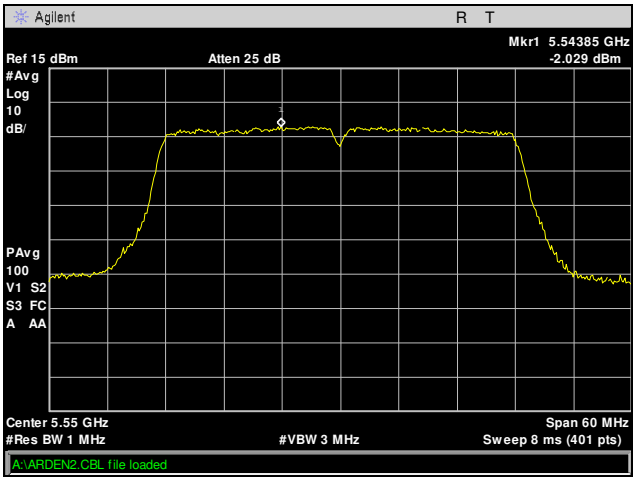
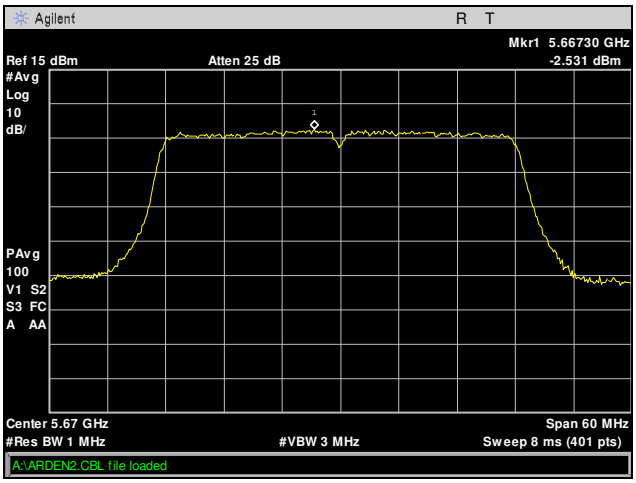
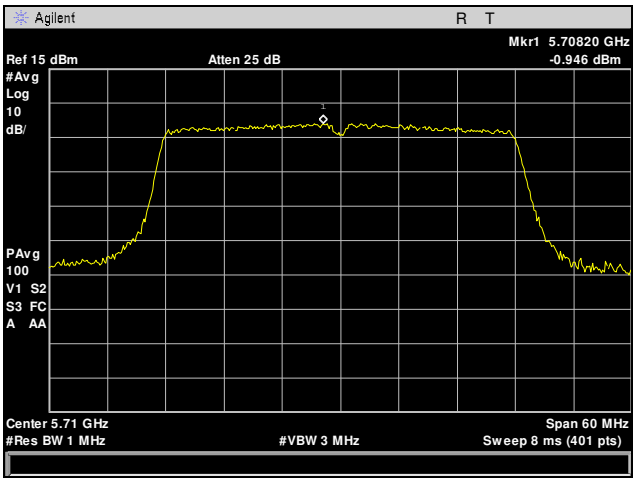


Plot 1040. Power Spectral Density, 802.11n 40 MHz, 5550 MHz, Port 8, Radio 1, 8x8



Plot 1041. Power Spectral Density, 802.11n 40 MHz, 5670 MHz, Port 8, Radio 1, 8x8



Plot 1042. Power Spectral Density, 802.11n 40 MHz, 5710 MHz, Port 8, Radio 1, 8x8

Electromagnetic Compatibility Criteria for Intentional Radiators

§15.407(b)(2 – 3) & (6 – 7) Undesirable Emissions

Test Requirements:

§ 15.407(b)(2): For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

§ 15.407(b)(3): For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

§ 15.407(b)(6): Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in Section 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in Section 15.207.

§ 15.407(b)(7): The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Test Procedure:

The EUT was placed on a non-conducting stand on a turntable in a chamber. To find the maximum emission the EUT was set to transmit on low, mid, and high channels. Additionally, the turntable was rotated 360 degrees, the EUT was oriented through its three orthogonal axes, and the receive antenna height was varied in order to maximize emissions.

For frequencies from 30 MHz to 1 GHz, measurements were first made using a peak detector with a 100 kHz resolution bandwidth. Emissions which exceeded the limits were re-measured using a quasi-peak detector with a 120 kHz resolution bandwidth.

Above 1 GHz, measurements were made pursuant the method described in FCC KDB 789033 D02 General UNII Test Procedure New Rules v01. The equation, **EIRP= E + 20 log D – 104.8** was used to convert field strength to EIRP (**E** = field strength (dBμV/m) and **D** = Reference measurement distance**).**

Above 1 GHz, a notch filter(5250 MHz – 5725 MHz) is used for filter the fundamental signal.

The EUT was compliant with the Radiated Spurious Emission limits of **§ 15.407(b)**. The over-the-limit emissions in the range 30 MHz to 100 MHz appear to be digital emissions since they still exist when the radio is off.

For emissions above 1 GHz and in restricted bands, measurements of the field strength were made with a peak detector and an average detector and compared with the limits of 15.209.

As an alternative, according to FCC KDB 789033 D02 General UNII Test Procedure New Rules v01, all emissions above 1 GHz that comply with the peak and average limits of 15.209 satisfy the requirements of unwanted emissions in 15.407.

Test Results:

For below 1 GHz, the EUT was compliant with the requirements of this section.

For above 1 GHz, the EUT was compliant with the requirements of this section.

Test Engineer(s): Jun Qi

Test Date(s): 11/04/16

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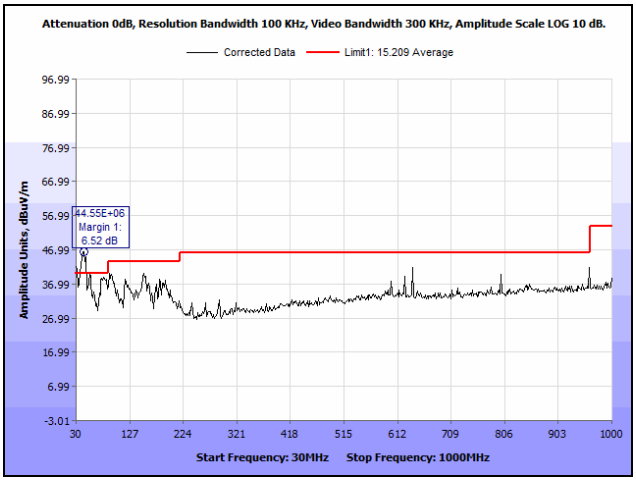
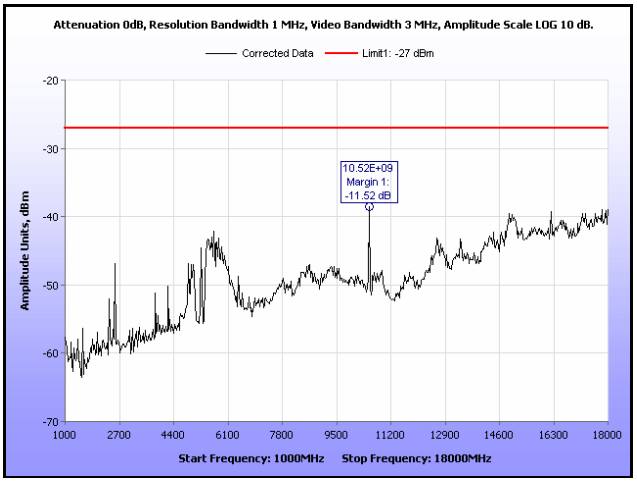
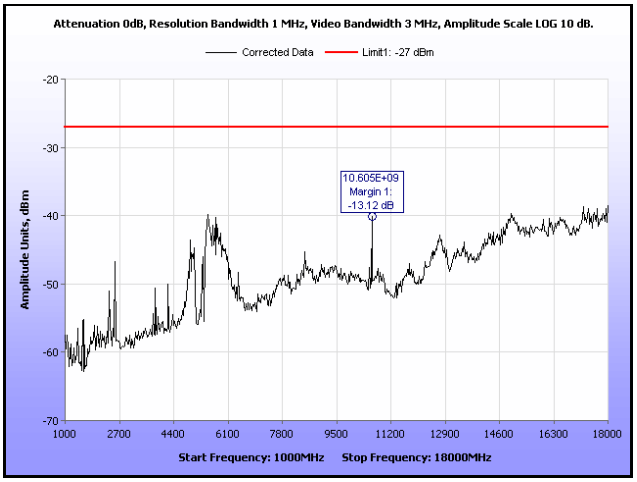


Plot 1043. Radiated Spurious Emissions, 30 MHz – 1 GHz, Radio Off

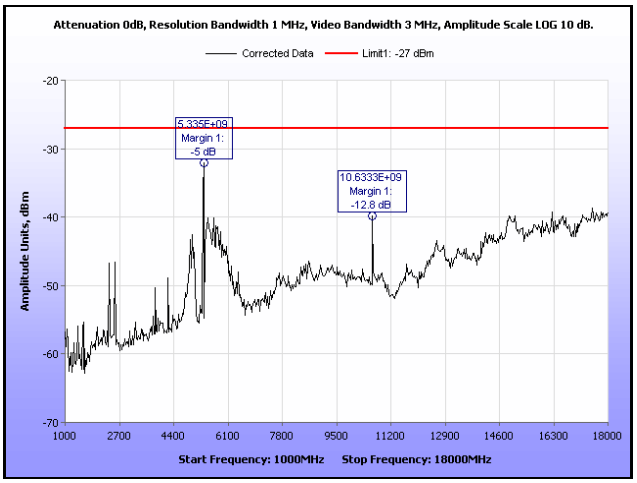
Radiated Spurious Emissions, 802.11a, 4x8



Plot 1044. Radiated Spurious Emissions, 802.11a, 5260 MHz, 1 GHz – 18 GHz, 4x8



Plot 1045. Radiated Spurious Emissions, 802.11a, 5300 MHz, 1 GHz – 18 GHz, 4x8



Plot 1046. Radiated Spurious Emissions, 802.11a, 5320 MHz, 1 GHz – 18 GHz, 4x8

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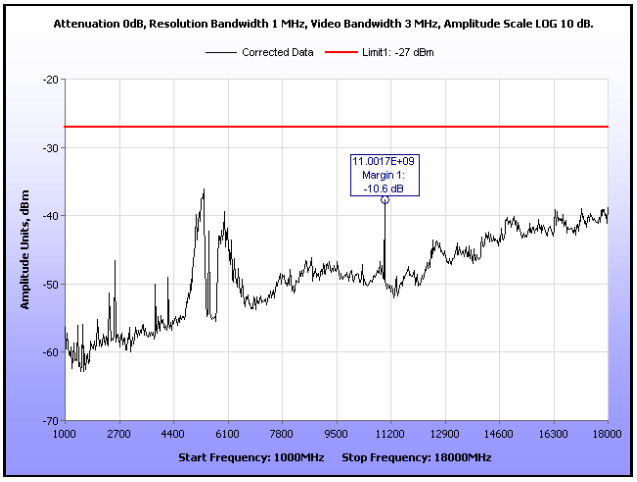
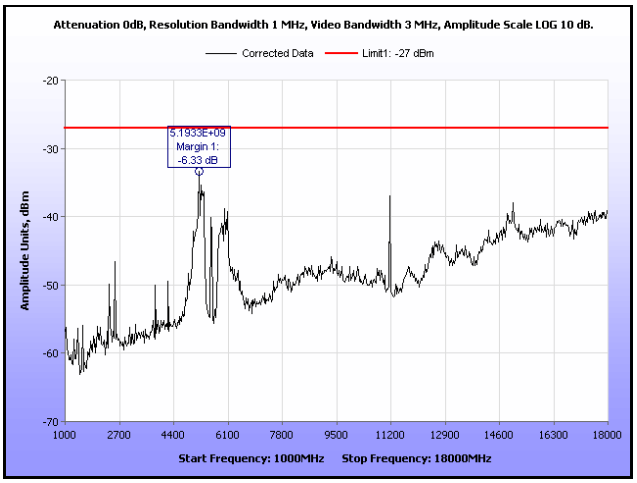
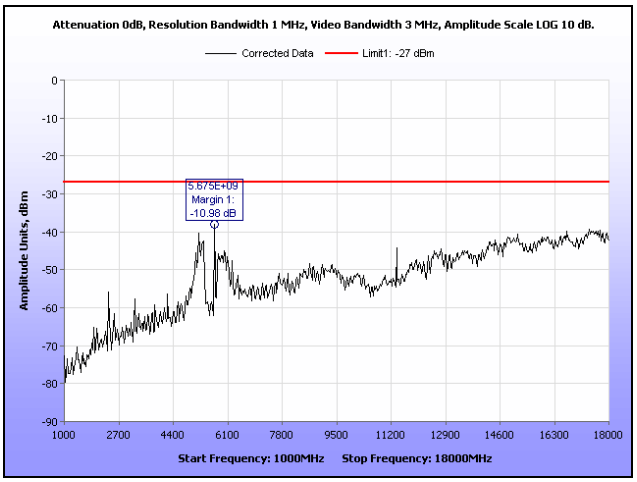


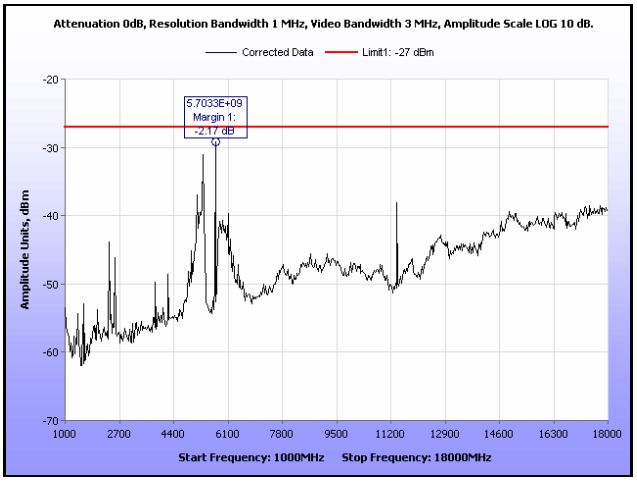
Plot 1047. Radiated Spurious Emissions, 802.11a, 5500 MHz, 1 GHz – 18 GHz, 4x8



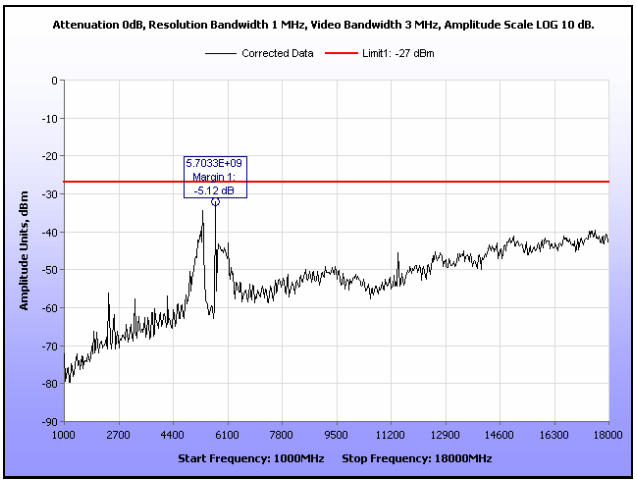
Plot 1048. Radiated Spurious Emissions, 802.11a, 5580 MHz, 1 GHz – 18 GHz, 4x8



Plot 1049. Radiated Spurious Emissions, 802.11a, 5680 MHz, 1 GHz – 18 GHz, 4x8

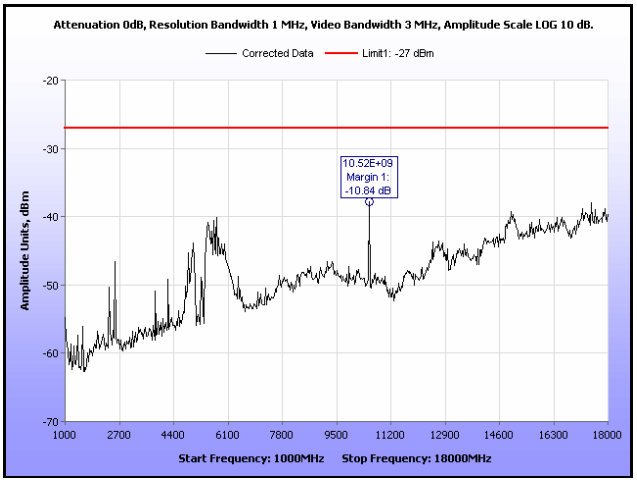


Plot 1050. Radiated Spurious Emissions, 802.11a, 5700 MHz, 1 GHz – 18 GHz, 4x8

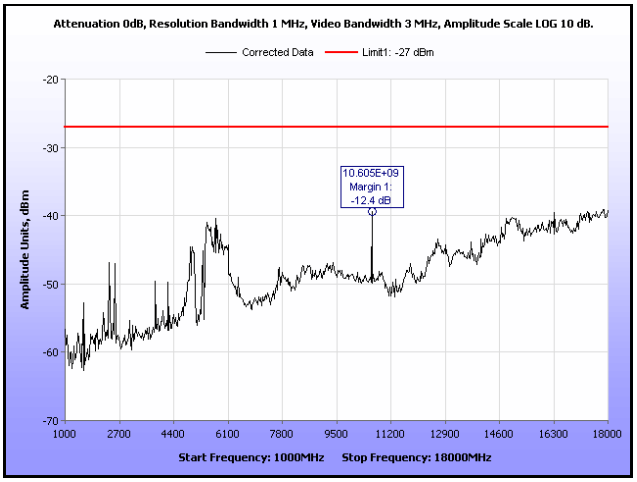


Plot 1051. Radiated Spurious Emissions, 802.11a, 5720 MHz, 1 GHz – 18 GHz, 4x8

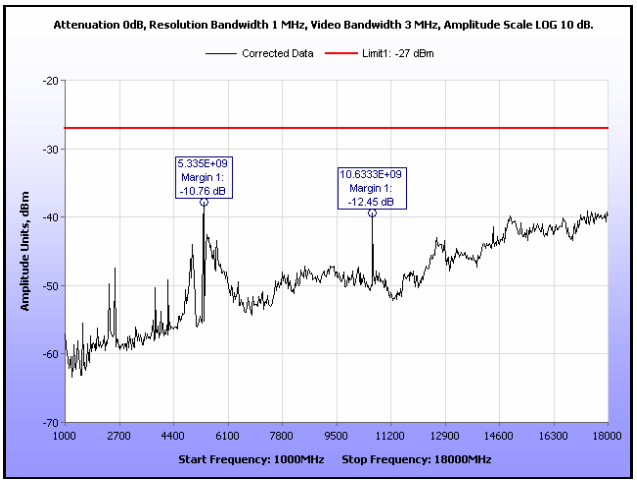
Radiated Spurious Emissions, 802.11ac 20 MHz



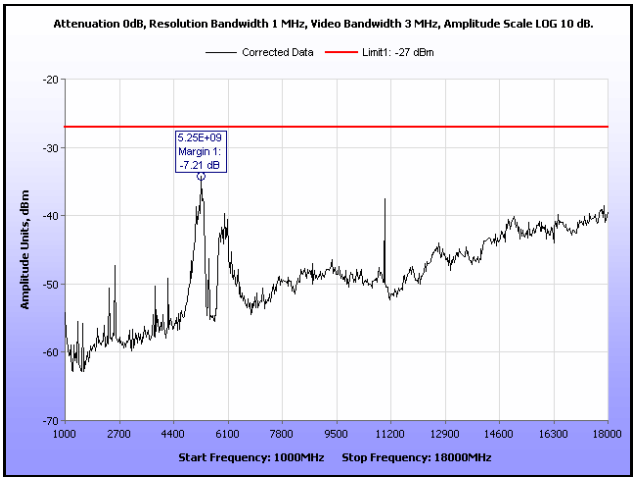
Plot 1052. Radiated Spurious Emissions, 802.11ac 20 MHz, 5260 MHz, 1 GHz – 18 GHz, 4x8



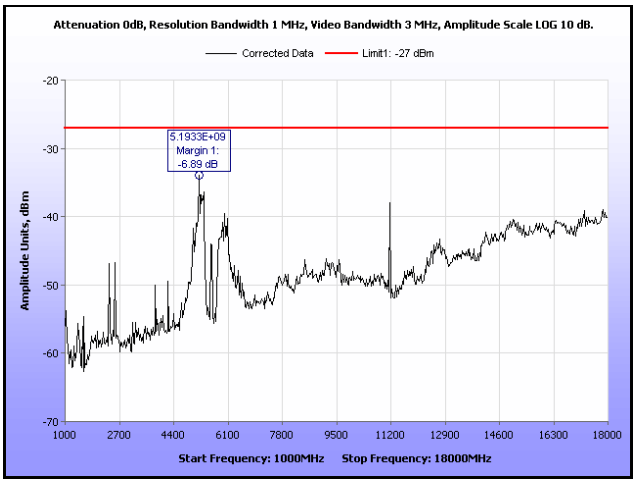
Plot 1053. Radiated Spurious Emissions, 802.11ac 20 MHz, 5300 MHz, 1 GHz – 18 GHz, 4x8



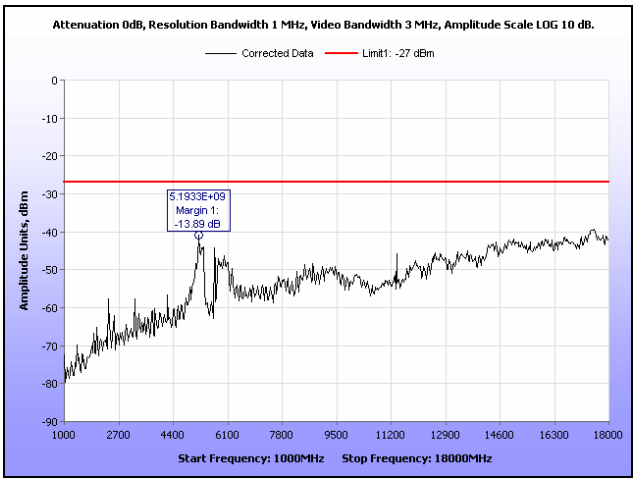
Plot 1054. Radiated Spurious Emissions, 802.11ac 20 MHz, 5320 MHz, 1 GHz – 18 GHz, 4x8



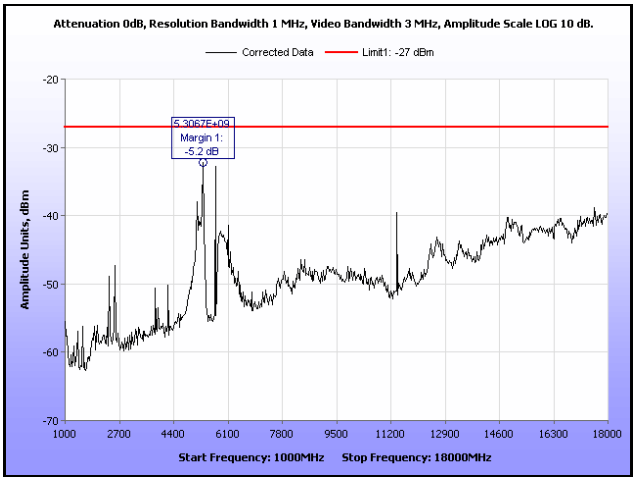
Plot 1055. Radiated Spurious Emissions, 802.11ac 20 MHz, 5500 MHz, 1 GHz – 18 GHz, 4x8



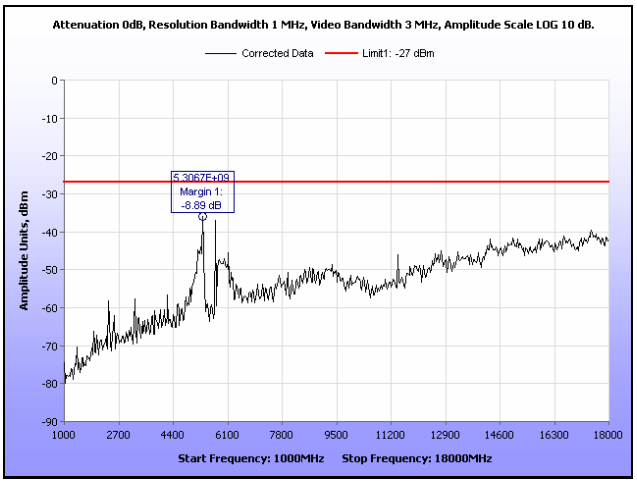
Plot 1056. Radiated Spurious Emissions, 802.11ac 20 MHz, 5580 MHz, 1 GHz – 18 GHz, 4x8



Plot 1057. Radiated Spurious Emissions, 802.11ac 20 MHz, 5680 MHz, 1 GHz – 18 GHz, 4x8

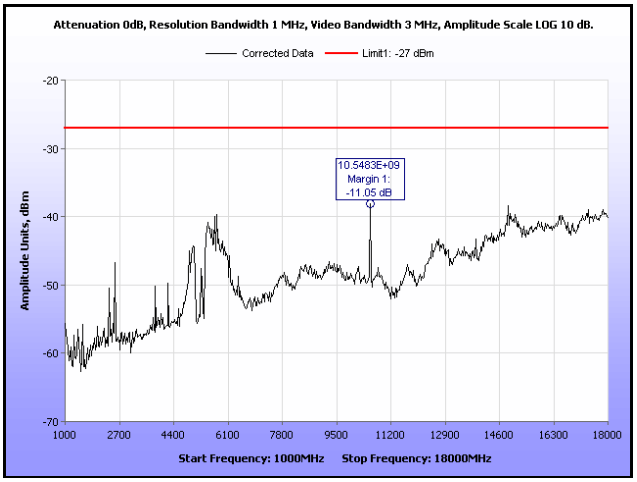


Plot 1058. Radiated Spurious Emissions, 802.11ac 20 MHz, 5700 MHz, 1 GHz – 18 GHz, 4x8

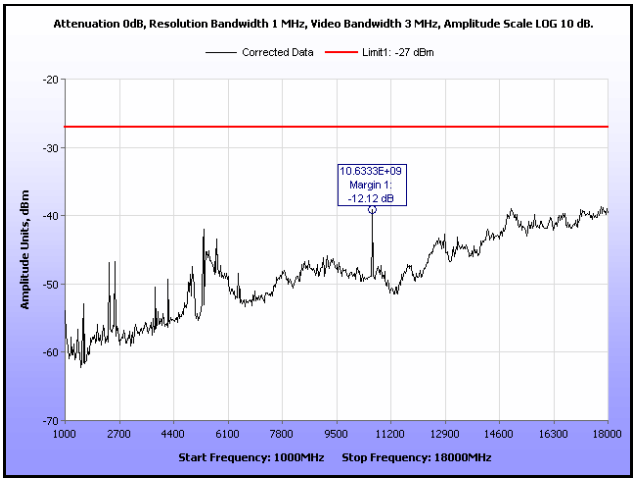


Plot 1059. Radiated Spurious Emissions, 802.11ac 20 MHz, 5720 MHz, 1 GHz – 18 GHz, 4x8

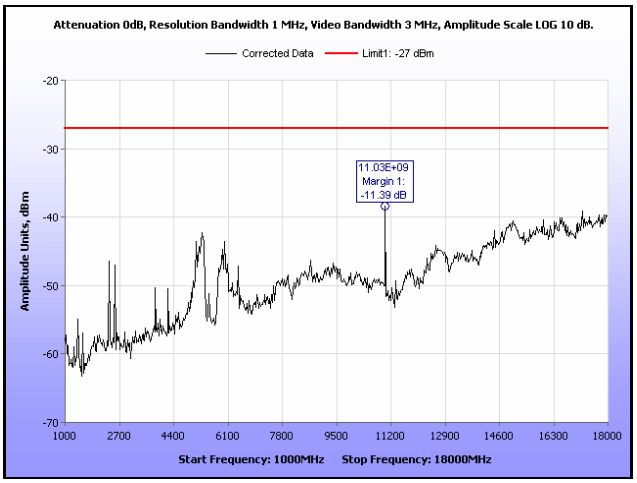
Radiated Spurious Emissions, 802.11ac 40 MHz



Plot 1060. Radiated Spurious Emissions, 802.11ac 40 MHz, 5270 MHz, 1 GHz – 18 GHz, 4x8



Plot 1061. Radiated Spurious Emissions, 802.11ac 40 MHz, 5310 MHz, 1 GHz – 18 GHz, 4x8



Plot 1062. Radiated Spurious Emissions, 802.11ac 40 MHz, 5510 MHz, 1 GHz – 18 GHz, 4x8

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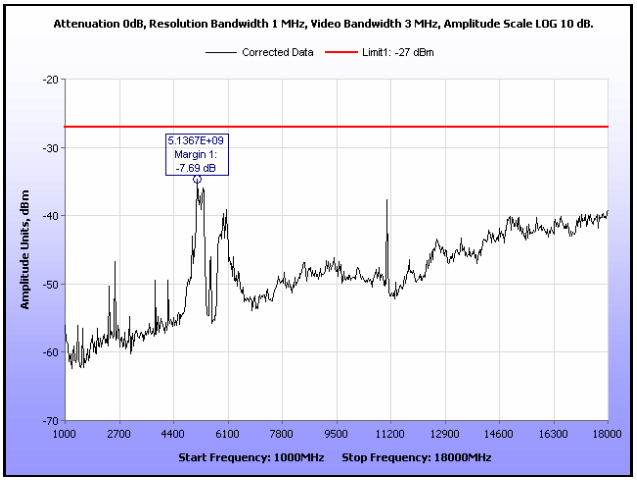
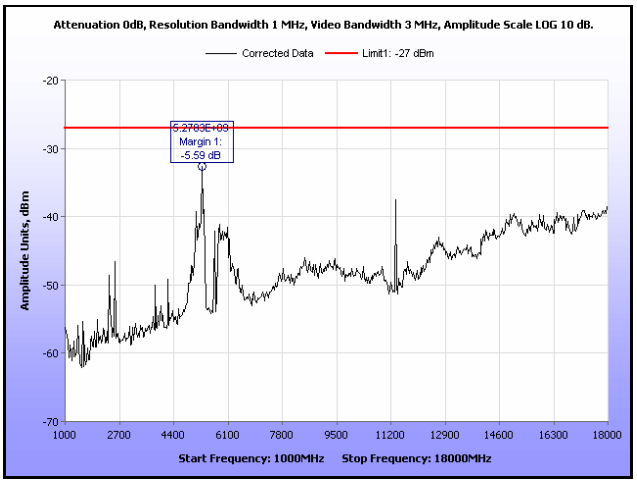
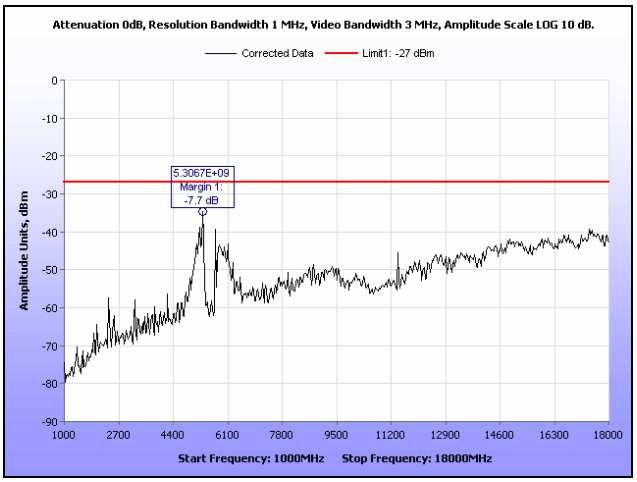


Plot 1063. Radiated Spurious Emissions, 802.11ac 40 MHz, 5550 MHz, 1 GHz – 18 GHz, 4x8

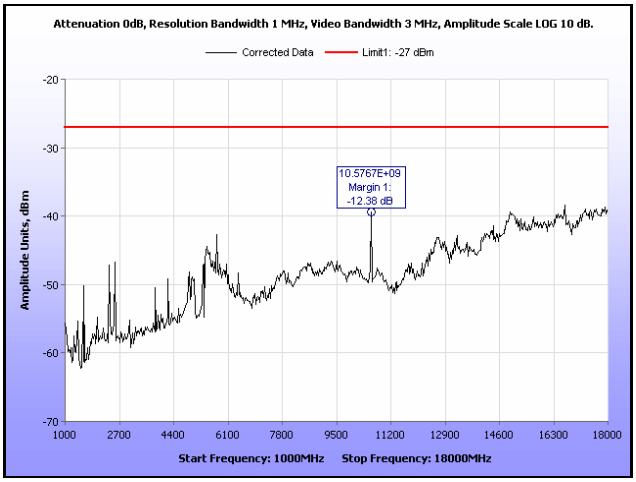


Plot 1064. Radiated Spurious Emissions, 802.11ac 40 MHz, 5670 MHz, 1 GHz – 18 GHz, 4x8

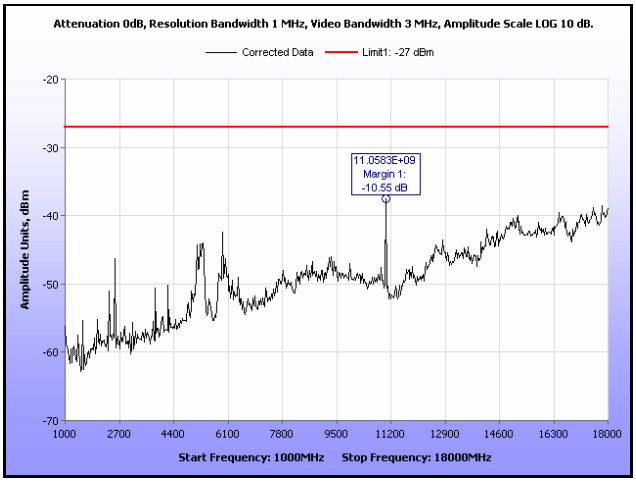


Plot 1065. Radiated Spurious Emissions, 802.11ac 40 MHz, 5710 MHz, 1 GHz – 18 GHz, 4x8

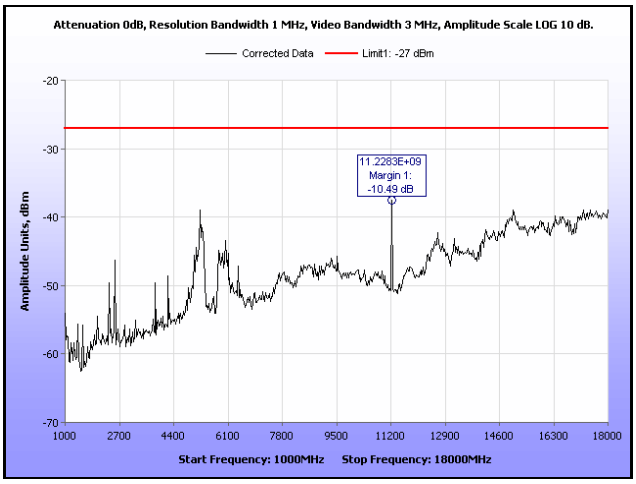
Radiated Spurious Emissions, 802.11ac 80 MHz



Plot 1066. Radiated Spurious Emissions, 802.11ac 80 MHz, 5290 MHz, 1 GHz – 18 GHz, 4x8



Plot 1067. Radiated Spurious Emissions, 802.11ac 80 MHz, 5530 MHz, 1 GHz – 18 GHz, 4x8



Plot 1068. Radiated Spurious Emissions, 802.11ac 80 MHz, 5610 MHz, 1 GHz – 18 GHz, 4x8

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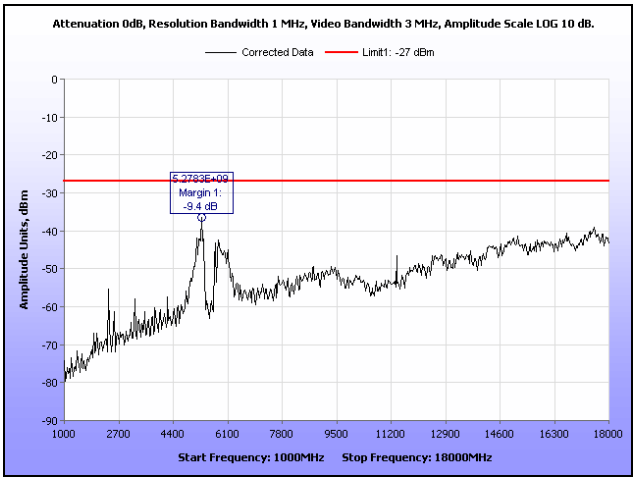
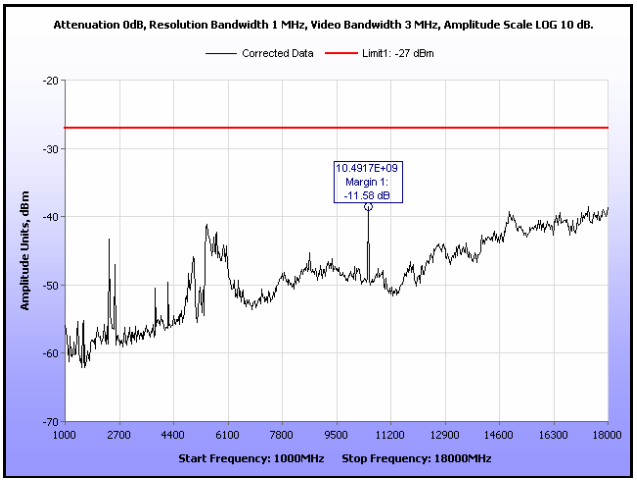
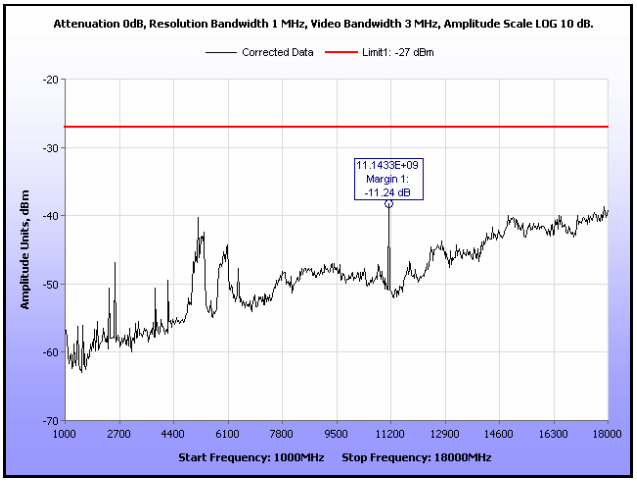


Plot 1069. Radiated Spurious Emissions, 802.11ac 80 MHz, 5690 MHz, 1 GHz – 18 GHz, 4x8

Radiated Spurious Emissions, 802.11ac 160 MHz



Plot 1070. Radiated Spurious Emissions, 802.11ac 160 MHz, 5250 MHz, 1 GHz – 18 GHz, 4x8



Plot 1071. Radiated Spurious Emissions, 802.11ac 160 MHz, 5570 MHz, 1 GHz – 18 GHz, 4x8

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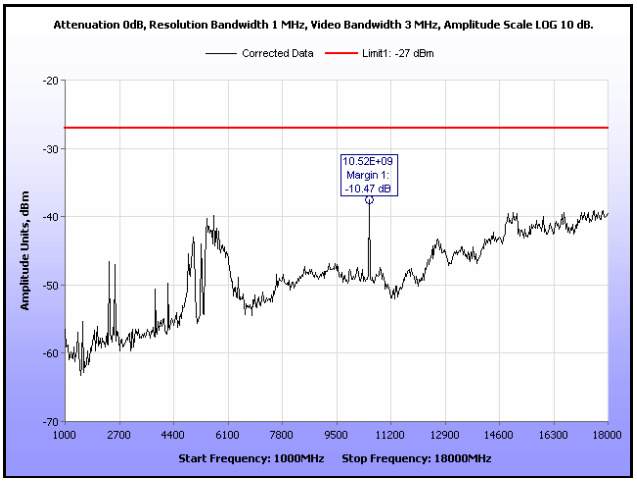
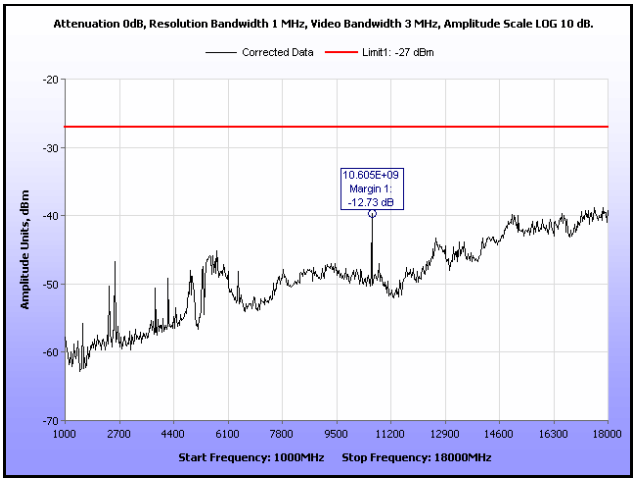
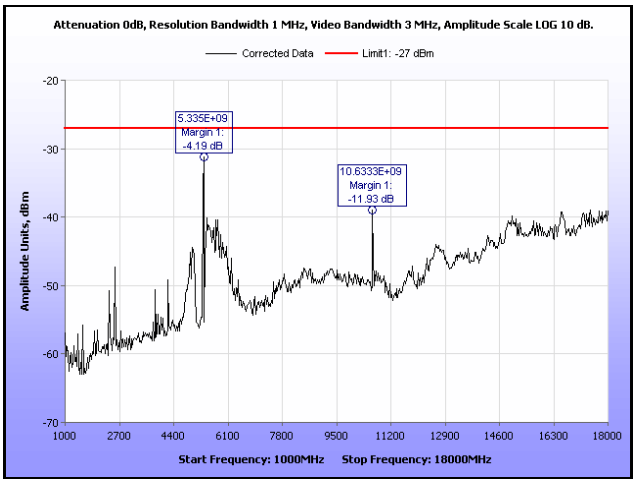
Radiated Spurious Emissions, 802.11n 20 MHz



Plot 1072. Radiated Spurious Emissions, 802.11n 20 MHz, 5260 MHz, 1 GHz – 18 GHz, 4x8



Plot 1073. Radiated Spurious Emissions, 802.11n 20 MHz, 5300 MHz, 1 GHz – 18 GHz, 4x8



Plot 1074. Radiated Spurious Emissions, 802.11n 20 MHz, 5320 MHz, 1 GHz – 18 GHz, 4x8

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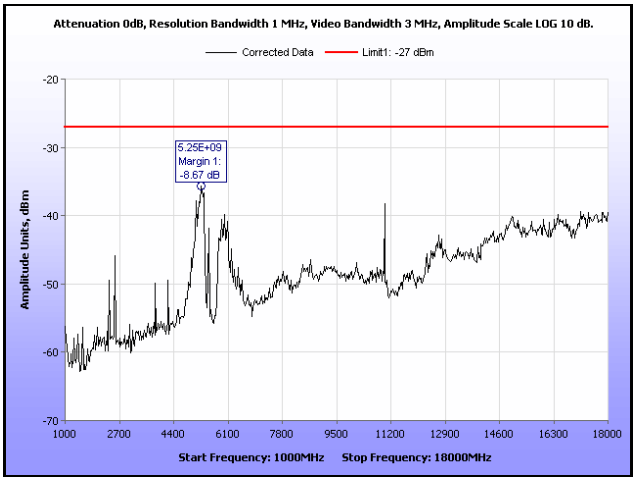
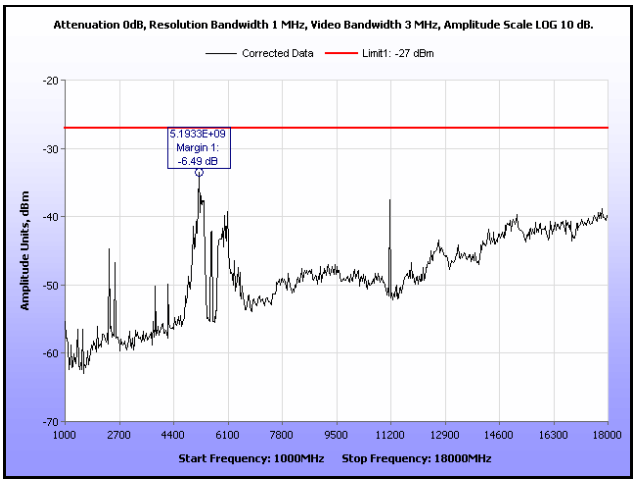
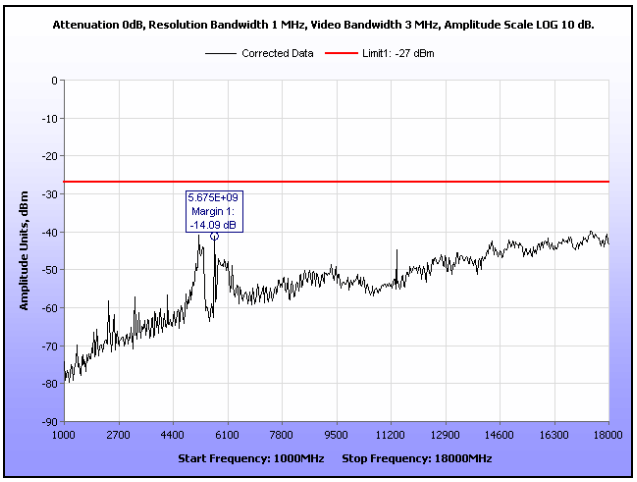


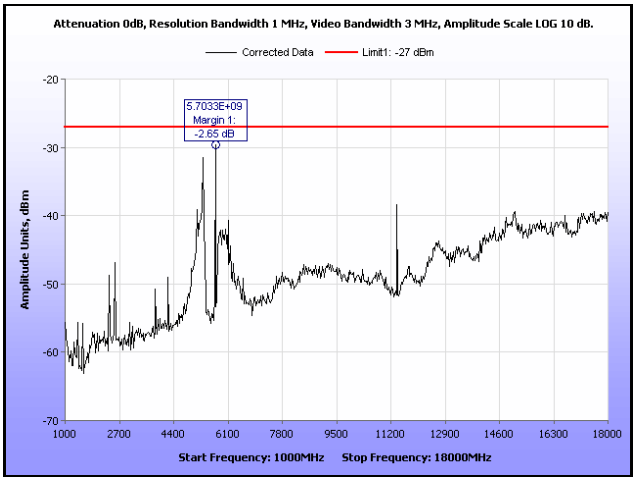
Plot 1075. Radiated Spurious Emissions, 802.11n 20 MHz, 5500 MHz, 1 GHz – 18 GHz, 4x8



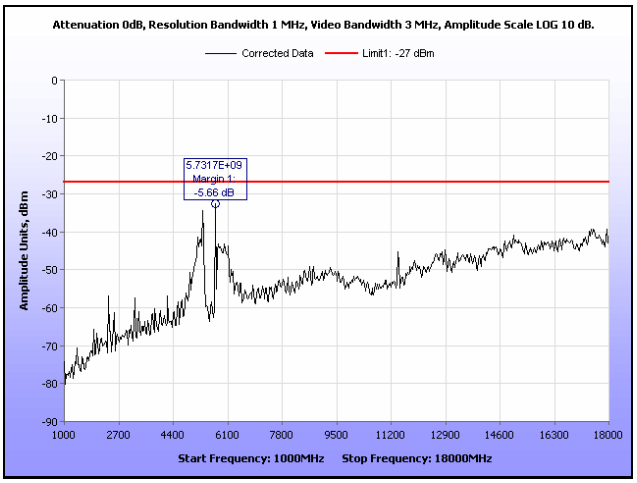
Plot 1076. Radiated Spurious Emissions, 802.11n 20 MHz, 5580 MHz, 1 GHz – 18 GHz, 4x8



Plot 1077. Radiated Spurious Emissions, 802.11n 20 MHz, 5680 MHz, 1 GHz – 18 GHz, 4x8

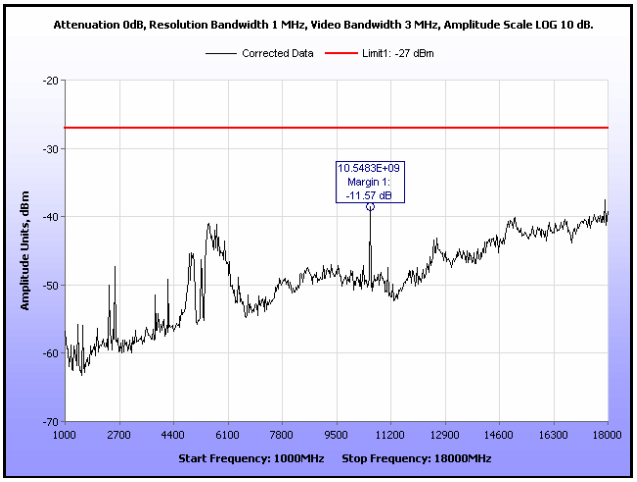


Plot 1078. Radiated Spurious Emissions, 802.11n 20 MHz, 5700 MHz, 1 GHz – 18 GHz, 4x8

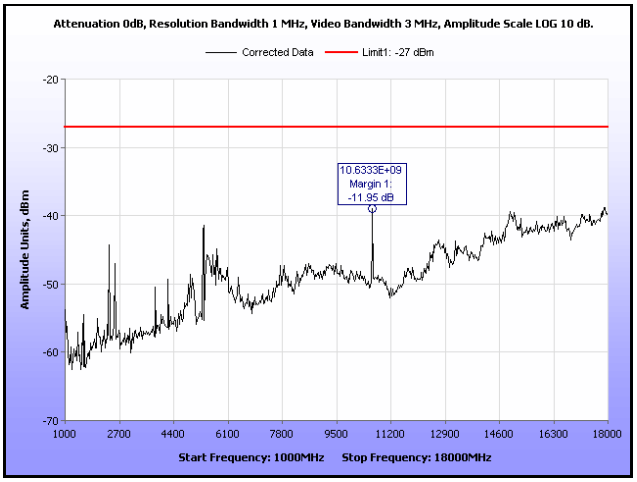


Plot 1079. Radiated Spurious Emissions, 802.11n 20 MHz, 5720 MHz, 1 GHz – 18 GHz, 4x8

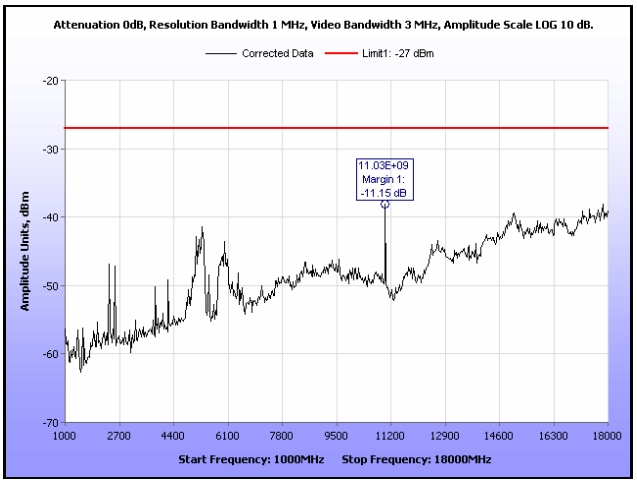
Radiated Spurious Emissions, 802.11n 40 MHz



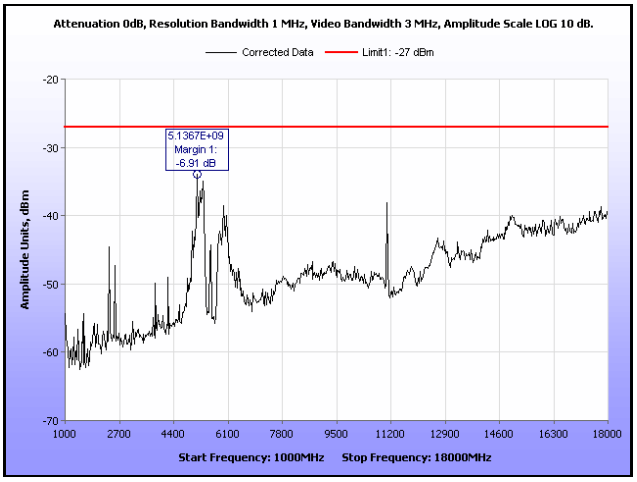
Plot 1080. Radiated Spurious Emissions, 802.11n 40 MHz, 5270 MHz, 1 GHz – 18 GHz, 4x8



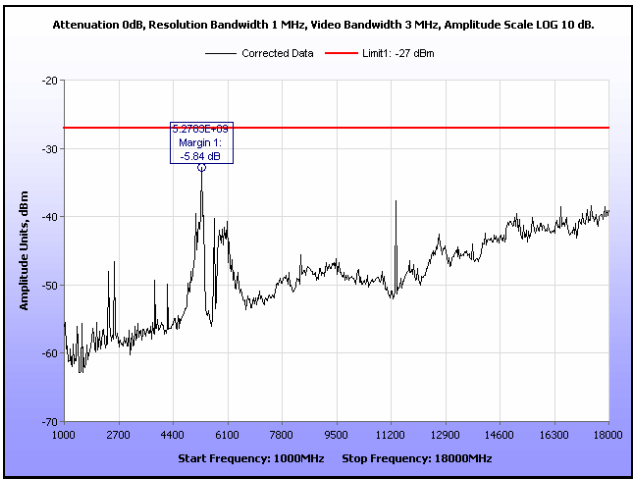
Plot 1081. Radiated Spurious Emissions, 802.11n 40 MHz, 5310 MHz, 1 GHz – 18 GHz, 4x8



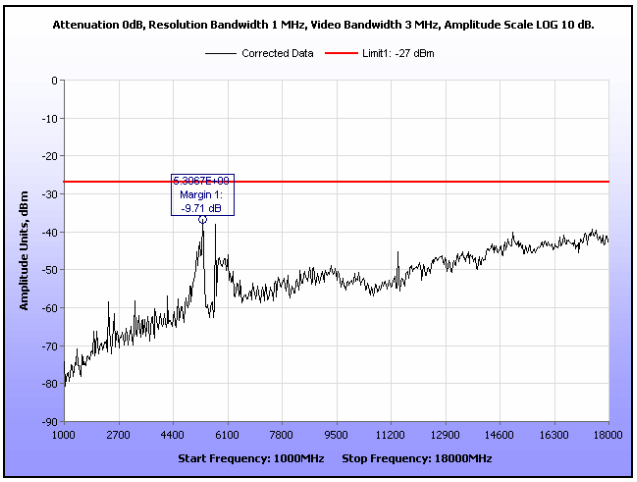
Plot 1082. Radiated Spurious Emissions, 802.11n 40 MHz, 5510 MHz, 1 GHz – 18 GHz, 4x8



Plot 1083. Radiated Spurious Emissions, 802.11n 40 MHz, 5550 MHz, 1 GHz – 18 GHz, 4x8

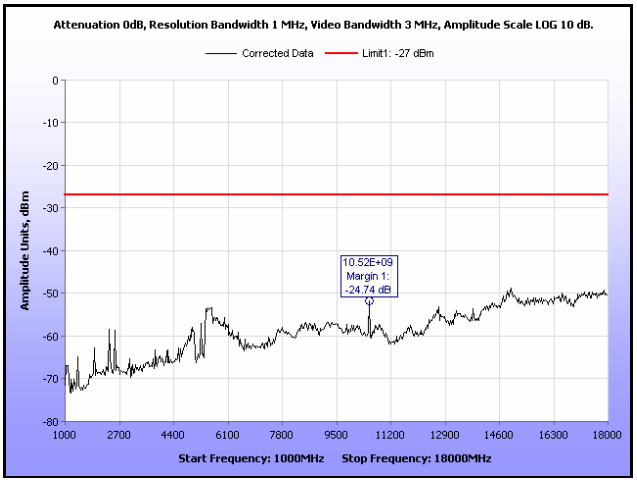


Plot 1084. Radiated Spurious Emissions, 802.11n 40 MHz, 5670 MHz, 1 GHz – 18 GHz, 4x8

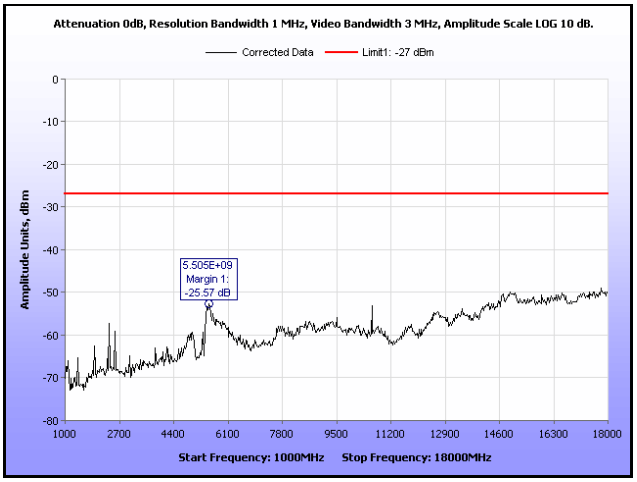


Plot 1085. Radiated Spurious Emissions, 802.11n 40 MHz, 5710 MHz, 1 GHz – 18 GHz, 4x8

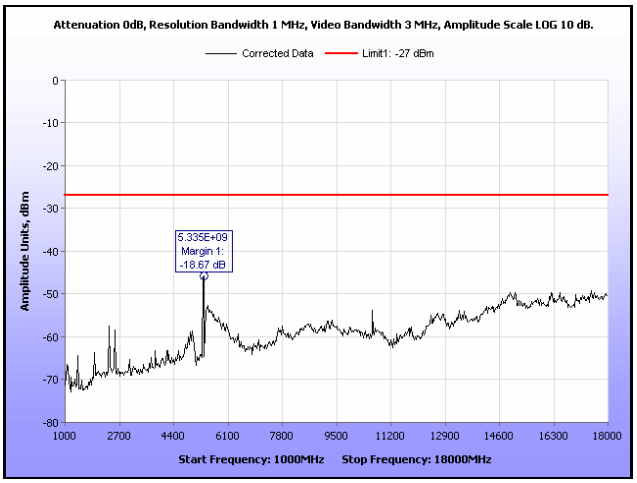
Radiated Spurious Emissions, 802.11a



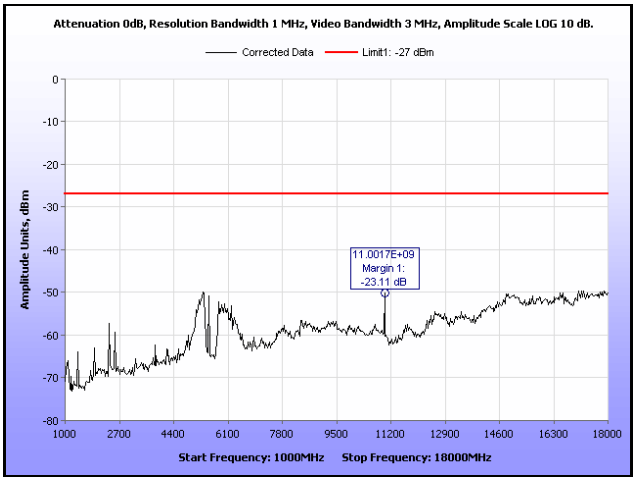
Plot 1086. Radiated Spurious Emissions, 802.11a, 5260 MHz, 1 GHz – 18 GHz, 8x8



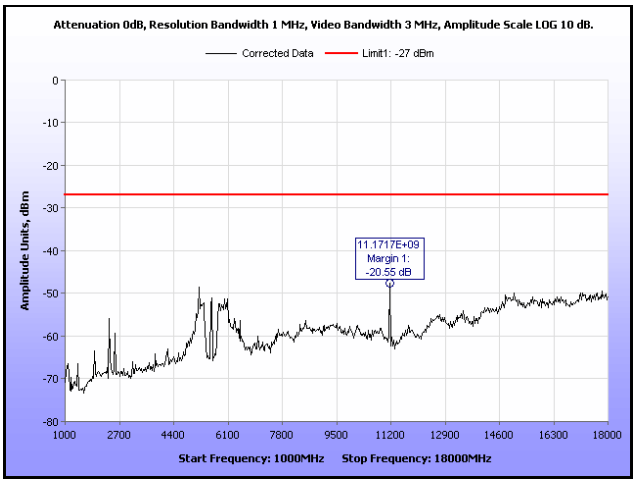
Plot 1087. Radiated Spurious Emissions, 802.11a, 5300 MHz, 1 GHz – 18 GHz, 8x8



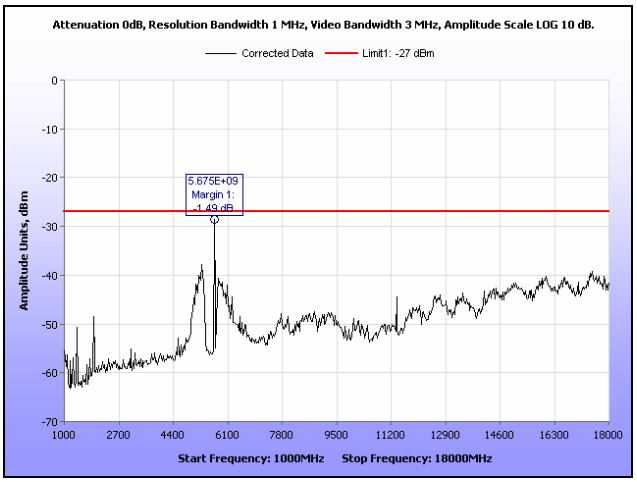
Plot 1088. Radiated Spurious Emissions, 802.11a, 5320 MHz, 1 GHz – 18 GHz, 8x8



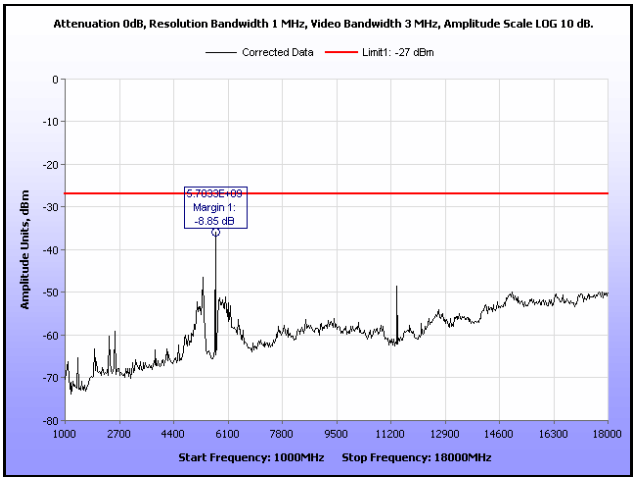
Plot 1089. Radiated Spurious Emissions, 802.11a, 5500 MHz, 1 GHz – 18 GHz, 8x8



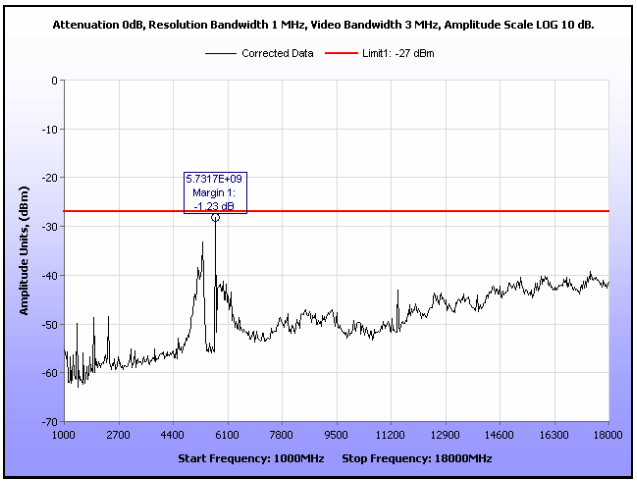
Plot 1090. Radiated Spurious Emissions, 802.11a, 5580 MHz, 1 GHz – 18 GHz, 8x8



Plot 1091. Radiated Spurious Emissions, 802.11a, 5680 MHz, 1 GHz – 18 GHz, 8x8

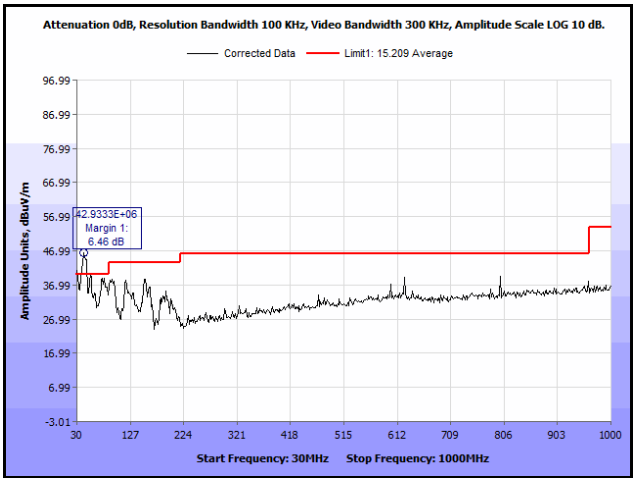


Plot 1092. Radiated Spurious Emissions, 802.11a, 5700 MHz, 1 GHz – 18 GHz, 8x8

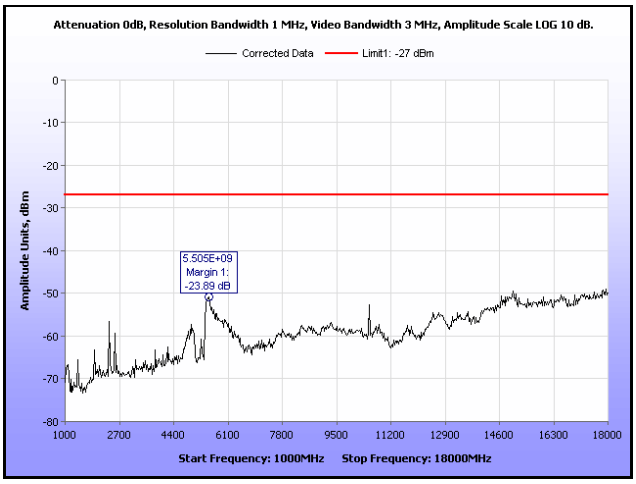


Plot 1093. Radiated Spurious Emissions, 802.11a, 5720 MHz, 1 GHz – 18 GHz, 8x8

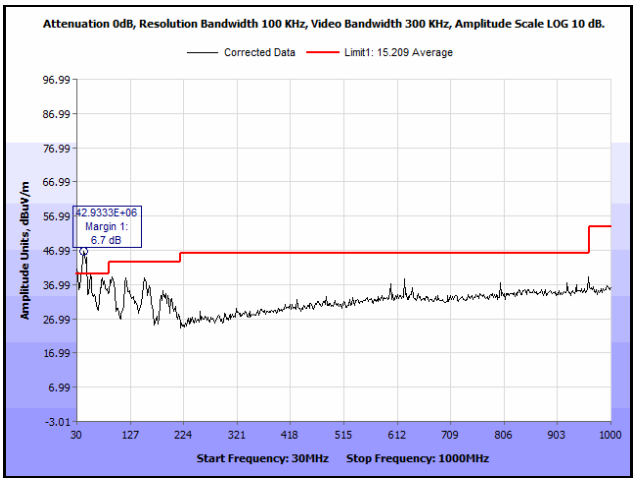
Radiated Spurious Emissions, 802.11ac 20 MHz



Plot 1094. Radiated Spurious Emissions, 802.11ac 20 MHz, 5260 MHz, 30 MHz – 1 GHz



Plot 1095. Radiated Spurious Emissions, 802.11ac 20 MHz, 5260 MHz, 1 GHz – 18 GHz, 8x8



Plot 1096. Radiated Spurious Emissions, 802.11ac 20 MHz, 5300 MHz, 30 MHz – 1 GHz

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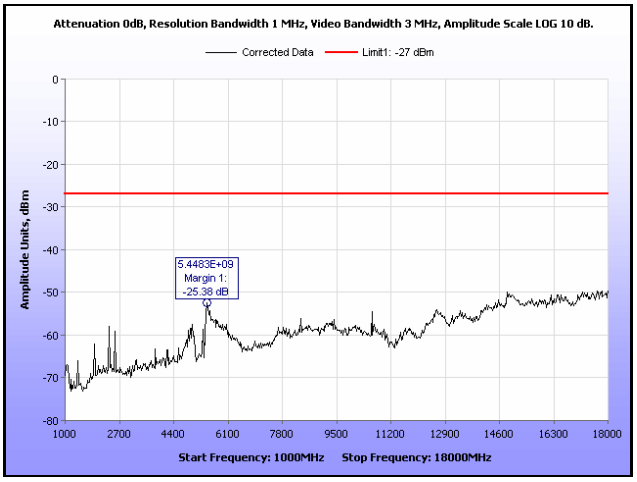
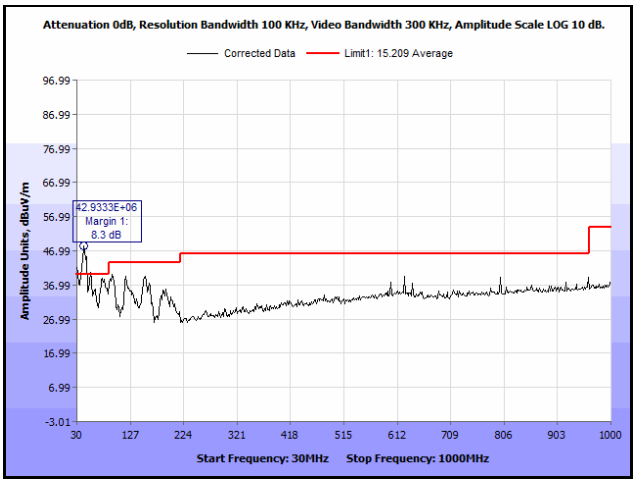
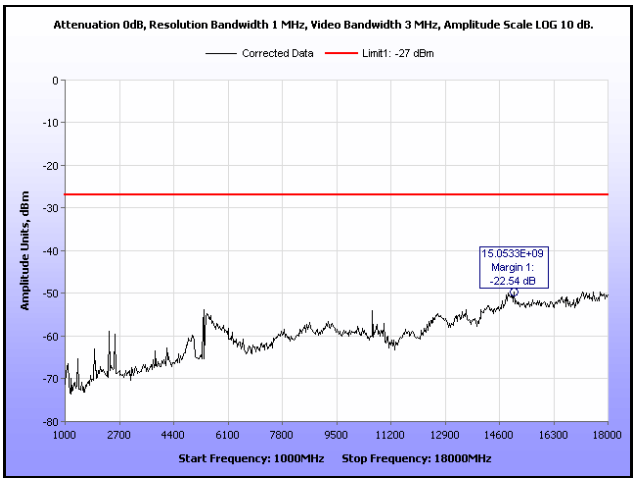


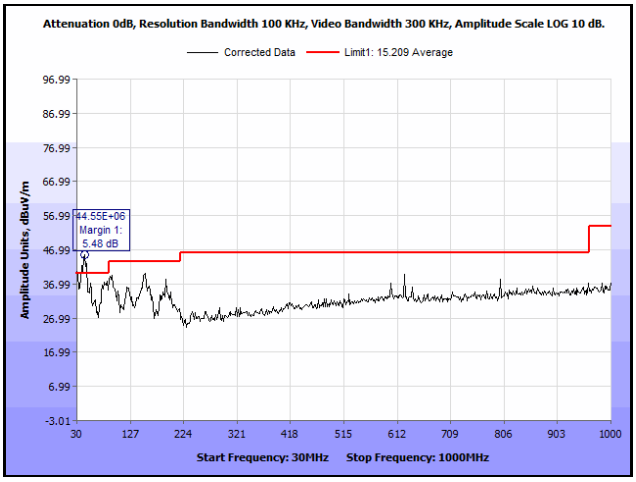
Plot 1097. Radiated Spurious Emissions, 802.11ac 20 MHz, 5300 MHz, 1 GHz – 18 GHz, 8x8



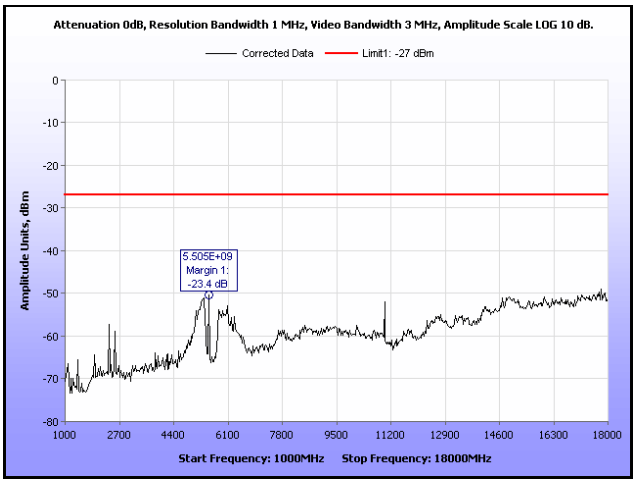
Plot 1098. Radiated Spurious Emissions, 802.11ac 20 MHz, 5320 MHz, 30 MHz – 1 GHz



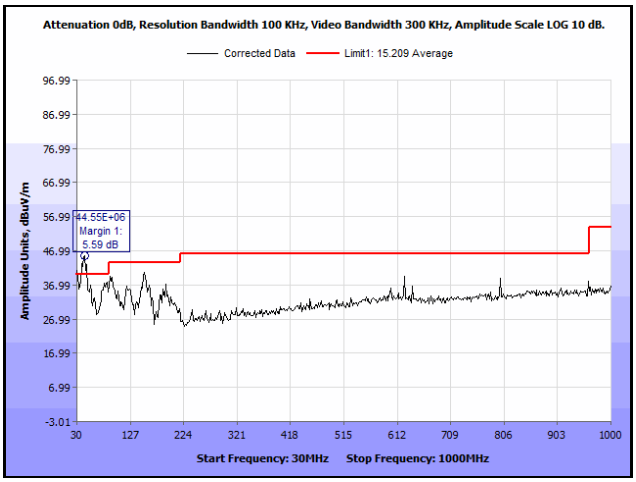
Plot 1099. Radiated Spurious Emissions, 802.11ac 20 MHz, 5320 MHz, 1 GHz – 18 GHz, 8x8



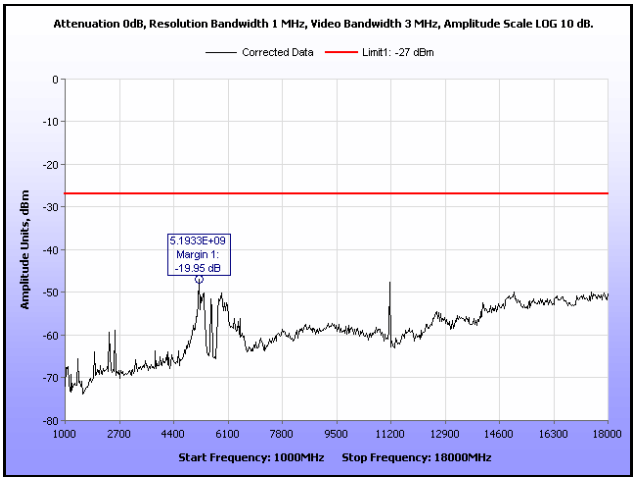
Plot 1100. Radiated Spurious Emissions, 802.11ac 20 MHz, 5500 MHz, 30 MHz – 1 GHz



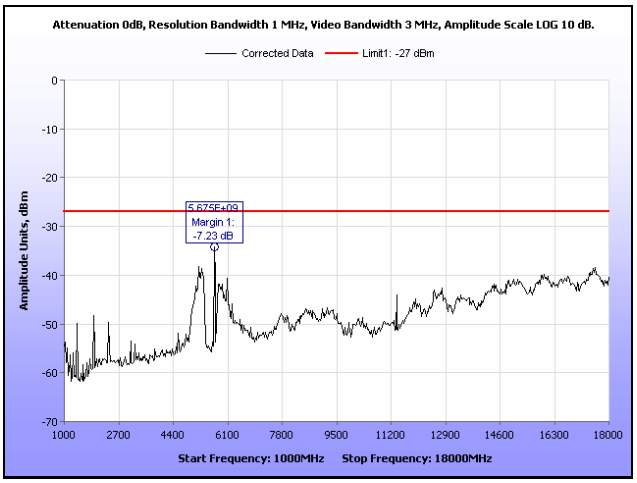
Plot 1101. Radiated Spurious Emissions, 802.11ac 20 MHz, 5500 MHz, 1 GHz – 18 GHz, 8x8



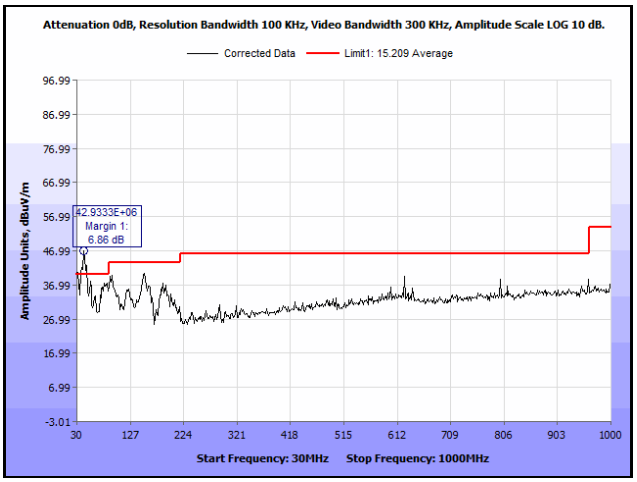
Plot 1102. Radiated Spurious Emissions, 802.11ac 20 MHz, 5580 MHz, 30 MHz – 1 GHz



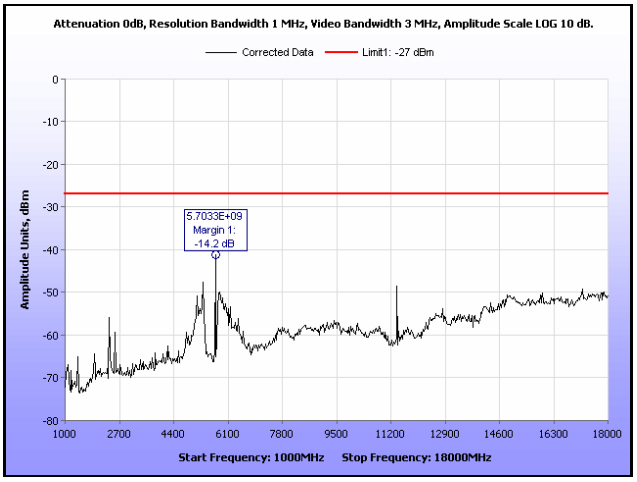
Plot 1103. Radiated Spurious Emissions, 802.11ac 20 MHz, 5580 MHz, 1 GHz – 18 GHz, 8x8



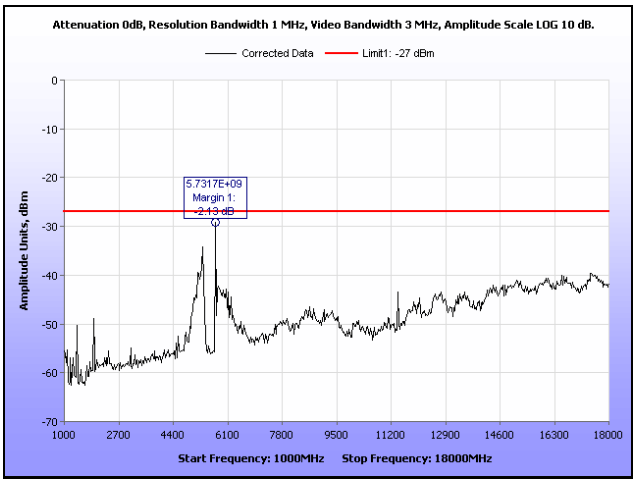
Plot 1104. Radiated Spurious Emissions, 802.11ac 20 MHz, 5680 MHz, 1 GHz – 18 GHz, 8x8



Plot 1105. Radiated Spurious Emissions, 802.11ac 20 MHz, 5700 MHz, 30 MHz – 1 GHz



Plot 1106. Radiated Spurious Emissions, 802.11ac 20 MHz, 5700 MHz, 1 GHz – 18 GHz, 8x8



Plot 1107. Radiated Spurious Emissions, 802.11ac 20 MHz, 5720 MHz, 1 GHz – 18 GHz, 8x8

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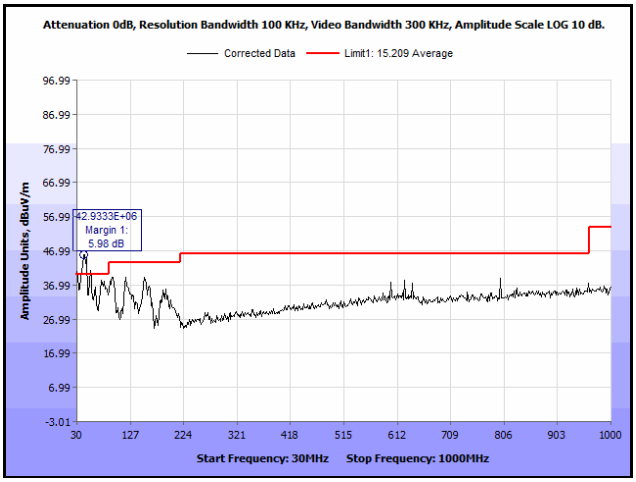
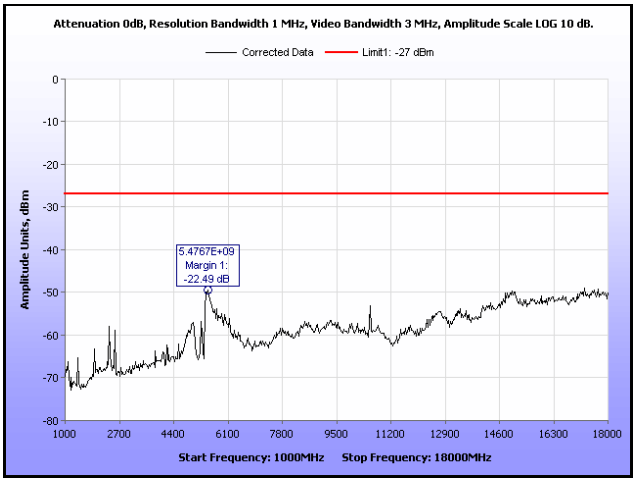
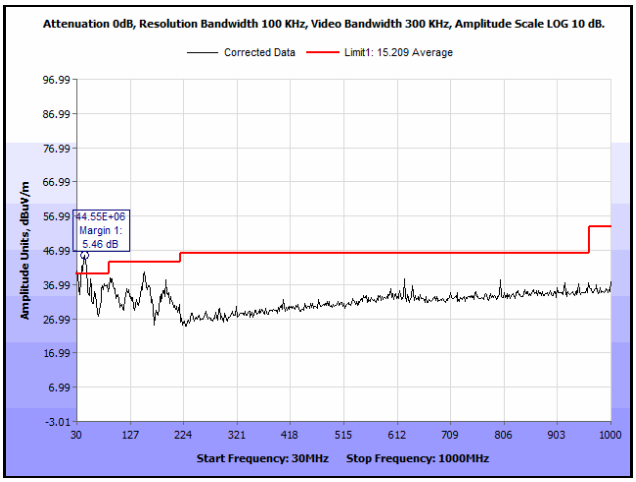
Radiated Spurious Emissions, 802.11ac 40 MHz



Plot 1108. Radiated Spurious Emissions, 802.11ac 40 MHz, 5270 MHz, 30 MHz – 1 GHz



Plot 1109. Radiated Spurious Emissions, 802.11ac 40 MHz, 5270 MHz, 1 GHz – 18 GHz, 8x8



Plot 1110. Radiated Spurious Emissions, 802.11ac 40 MHz, 5310 MHz, 30 MHz – 1 GHz

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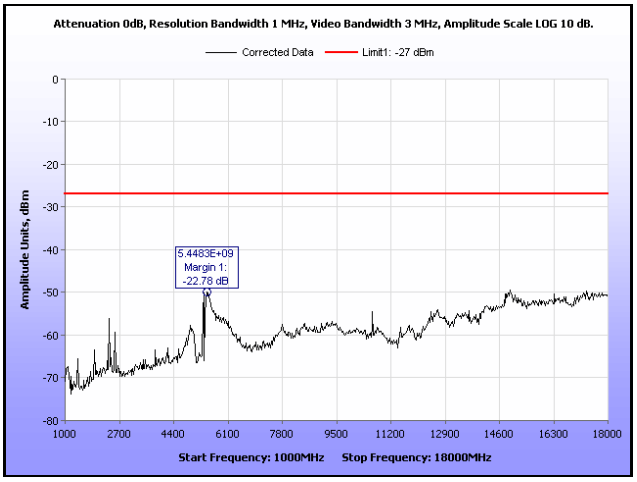
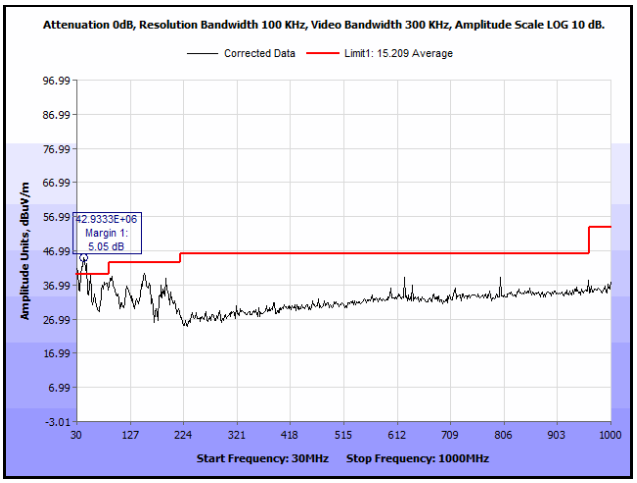
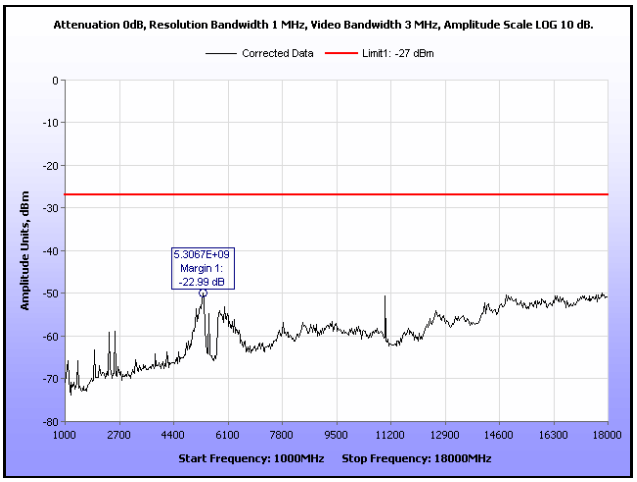


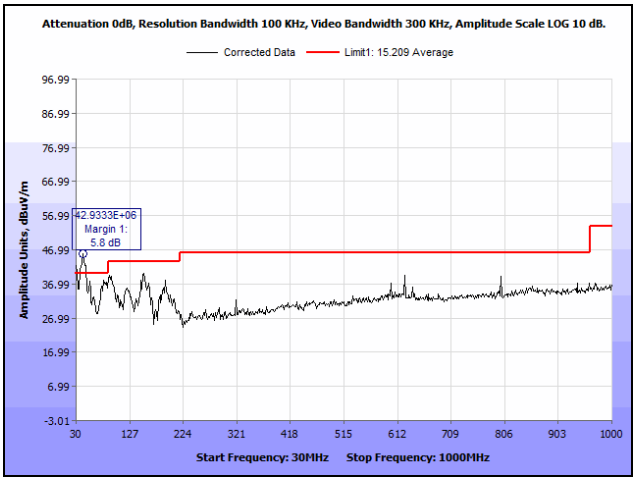
Plot 1111. Radiated Spurious Emissions, 802.11ac 40 MHz, 5310 MHz, 1 GHz – 18 GHz, 8x8



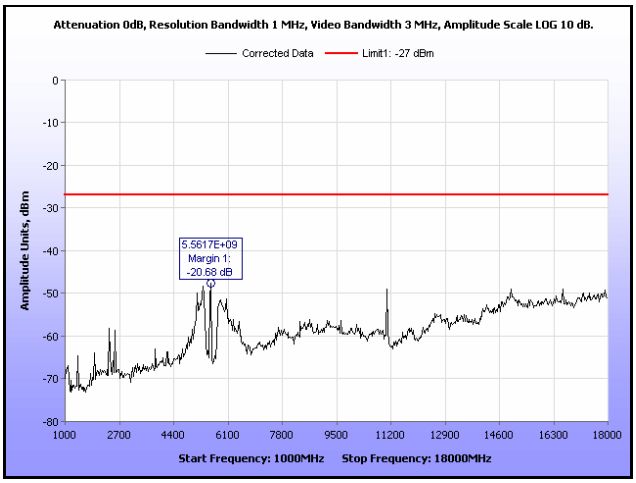
Plot 1112. Radiated Spurious Emissions, 802.11ac 40 MHz, 5510 MHz, 30 MHz – 1 GHz



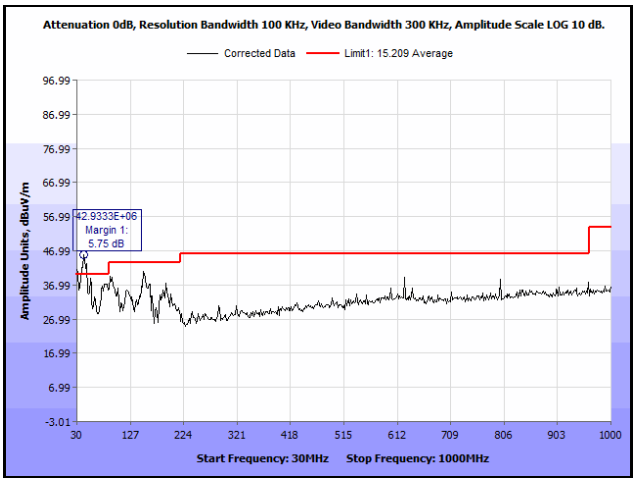
Plot 1113. Radiated Spurious Emissions, 802.11ac 40 MHz, 5510 MHz, 1 GHz – 18 GHz, 8x8



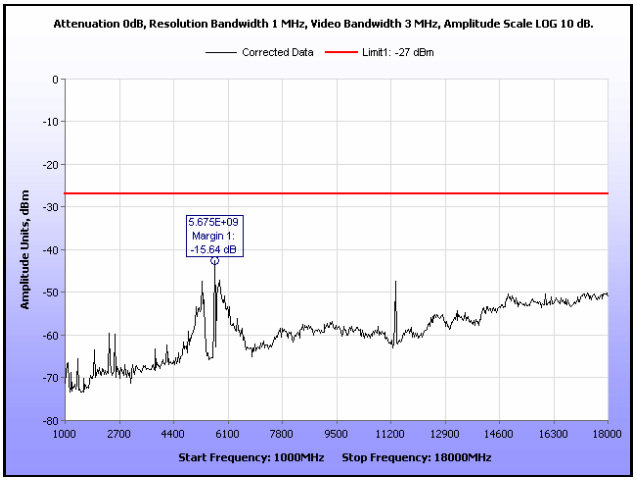
Plot 1114. Radiated Spurious Emissions, 802.11ac 40 MHz, 5550 MHz, 30 MHz – 1 GHz



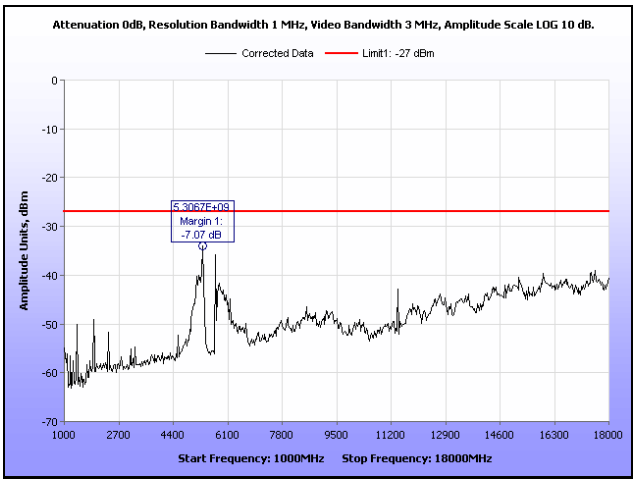
Plot 1115. Radiated Spurious Emissions, 802.11ac 40 MHz, 5550 MHz, 1 GHz – 18 GHz, 8x8



Plot 1116. Radiated Spurious Emissions, 802.11ac 40 MHz, 5670 MHz, 30 MHz – 1 GHz

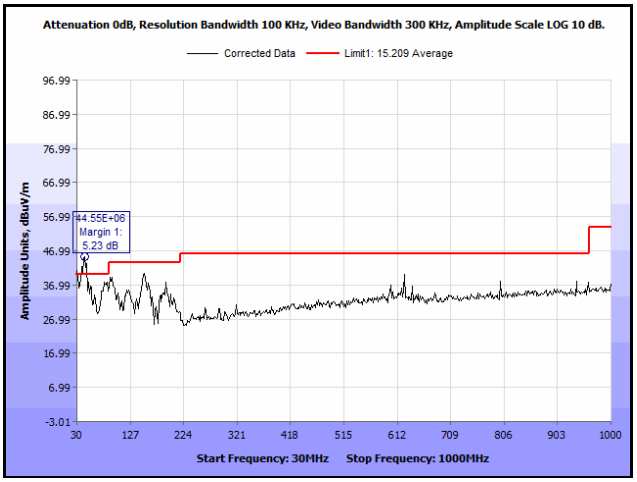


Plot 1117. Radiated Spurious Emissions, 802.11ac 40 MHz, 5670 MHz, 1 GHz – 18 GHz, 8x8

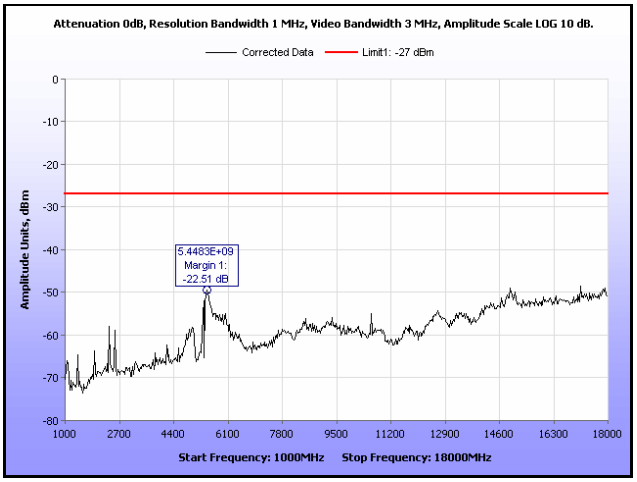


Plot 1118. Radiated Spurious Emissions, 802.11ac 40 MHz, 5710 MHz, 1 GHz – 18 GHz, 8x8

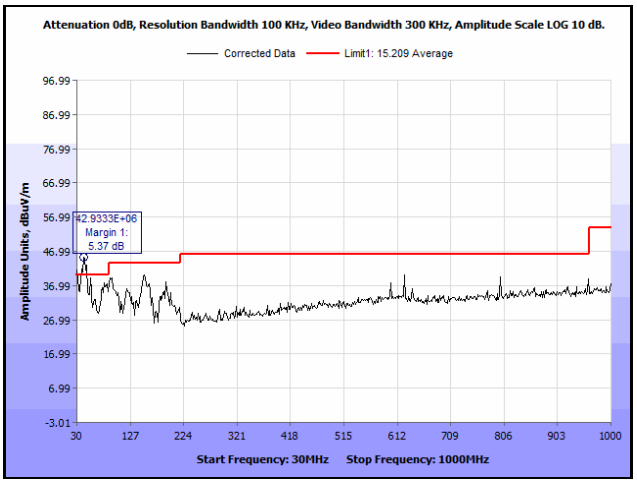
Radiated Spurious Emissions, 802.11ac 80 MHz



Plot 1119. Radiated Spurious Emissions, 802.11ac 80 MHz, 5290 MHz, 30 MHz – 1 GHz



Plot 1120. Radiated Spurious Emissions, 802.11ac 80 MHz, 5290 MHz, 1 GHz – 18 GHz, 8x8



Plot 1121. Radiated Spurious Emissions, 802.11ac 80 MHz, 5530 MHz, 30 MHz – 1 GHz

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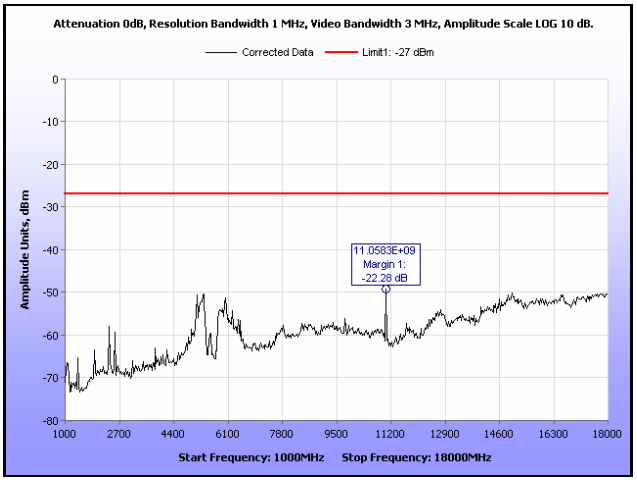
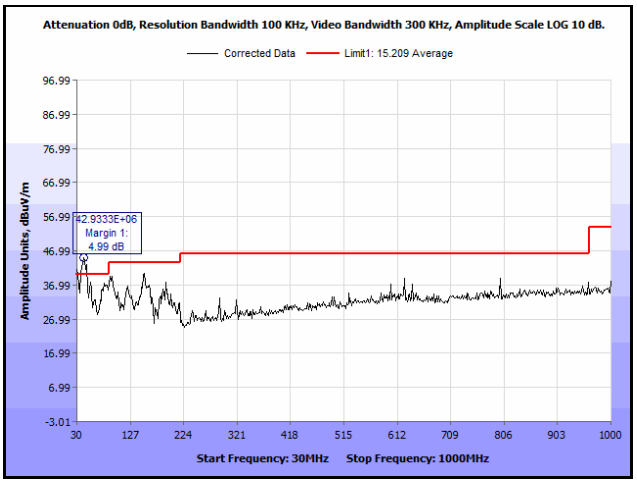
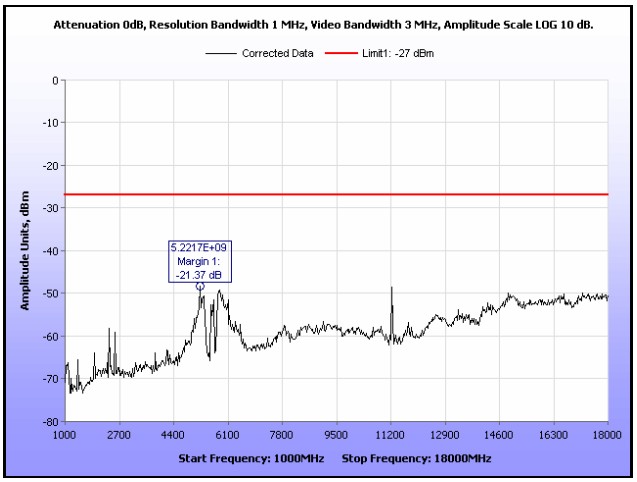


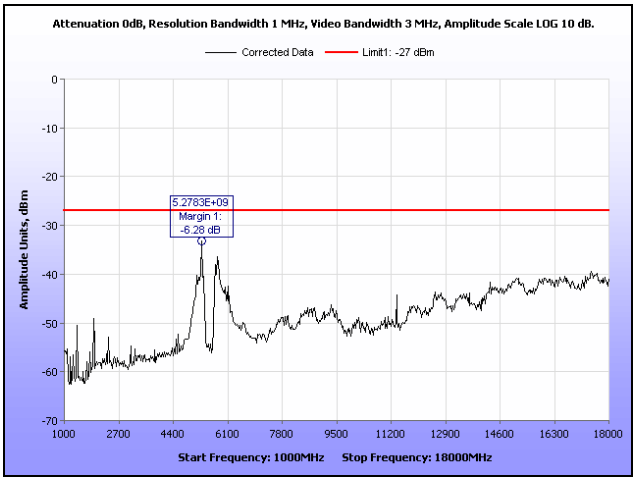
Plot 1122. Radiated Spurious Emissions, 802.11ac 80 MHz, 5530 MHz, 1 GHz – 18 GHz, 8x8



Plot 1123. Radiated Spurious Emissions, 802.11ac 80 MHz, 5610 MHz, 30 MHz – 1 GHz

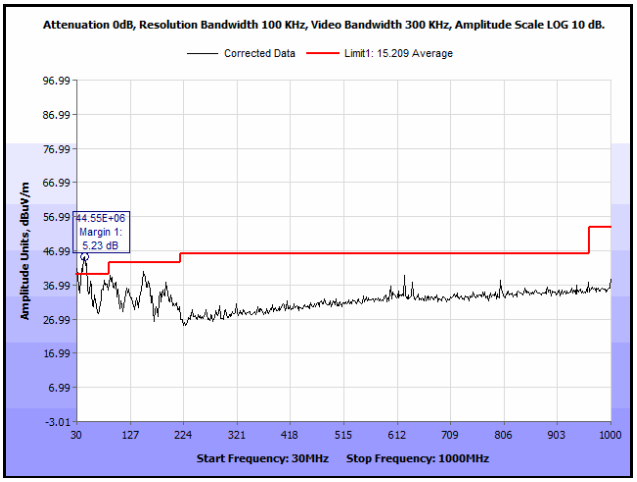


Plot 1124. Radiated Spurious Emissions, 802.11ac 80 MHz, 5610 MHz, 1 GHz – 18 GHz, 8x8

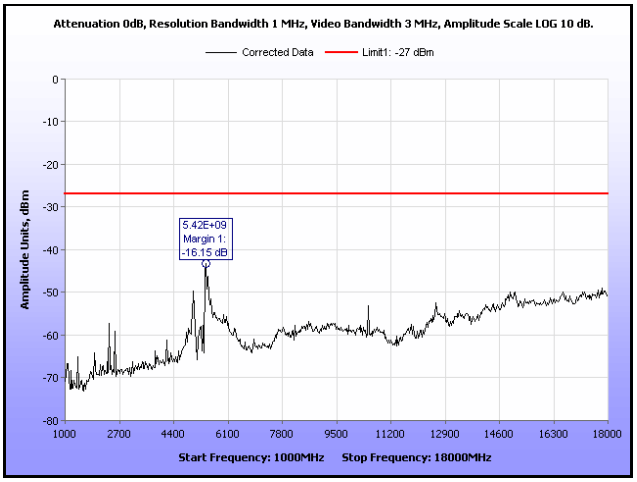


Plot 1125. Radiated Spurious Emissions, 802.11ac 80 MHz, 5690 MHz, 1 GHz – 18 GHz, 8x8

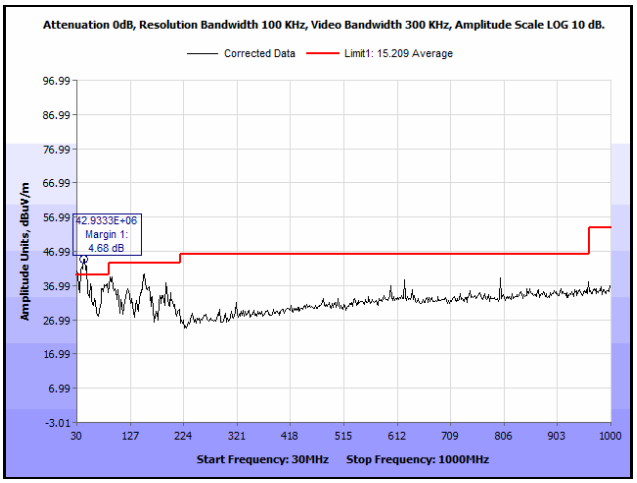
Radiated Spurious Emissions, 802.11ac 160 MHz



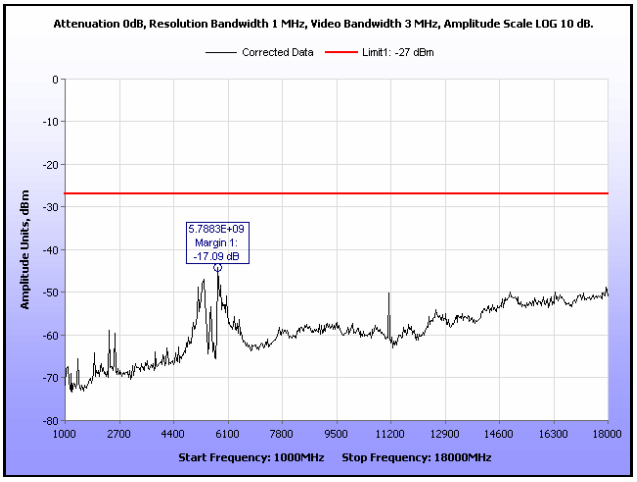
Plot 1126. Radiated Spurious Emissions, 802.11ac 160 MHz, 5250 MHz, 30 MHz – 1 GHz



Plot 1127. Radiated Spurious Emissions, 802.11ac 160 MHz, 5250 MHz, 1 GHz – 18 GHz, 8x8



Plot 1128. Radiated Spurious Emissions, 802.11ac 160 MHz, 5570 MHz, 30 MHz – 1 GHz



Plot 1129. Radiated Spurious Emissions, 802.11ac 160 MHz, 5570 MHz, 1 GHz – 18 GHz, 8x8

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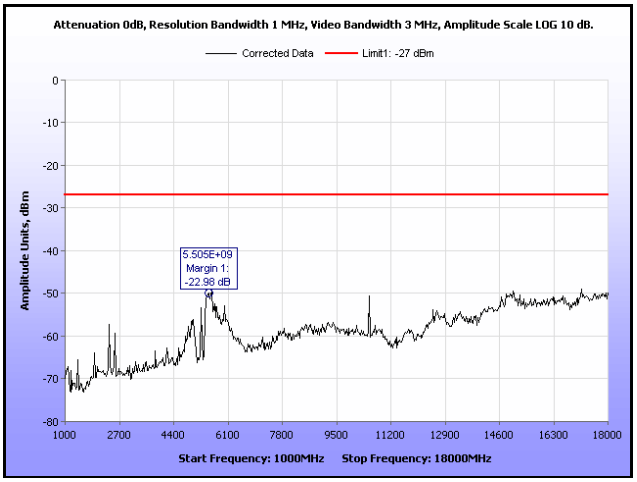
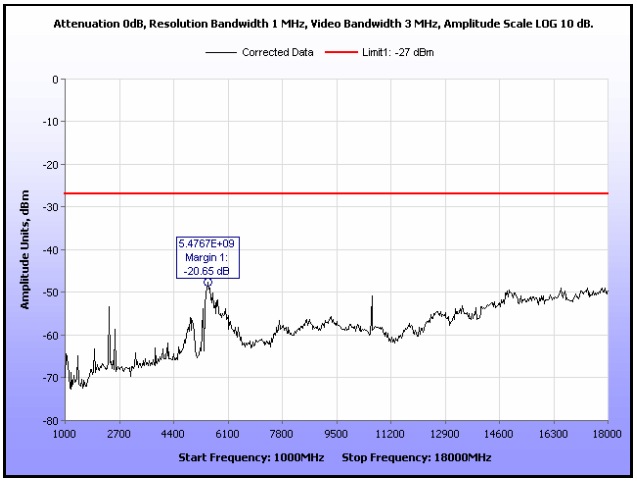
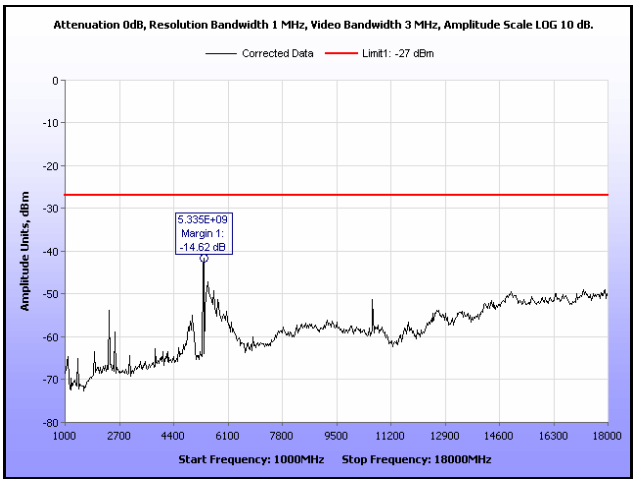
Radiated Spurious Emissions, 802.11n 20 MHz



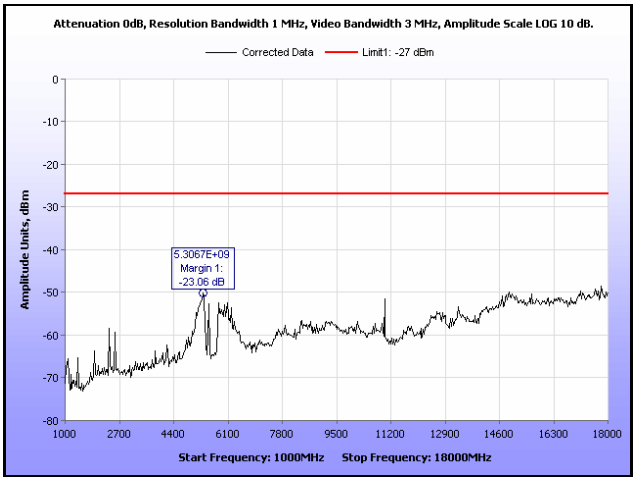
Plot 1130. Radiated Spurious Emissions, 802.11n 20 MHz, 5260 MHz, 1 GHz – 18 GHz, 8x8



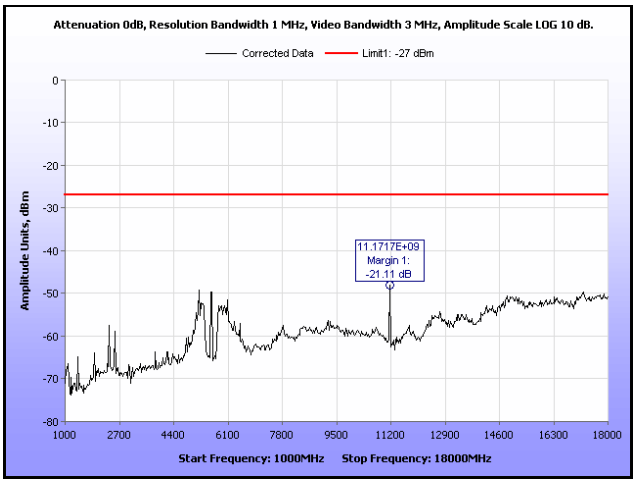
Plot 1131. Radiated Spurious Emissions, 802.11n 20 MHz, 5300 MHz, 1 GHz – 18 GHz, 8x8



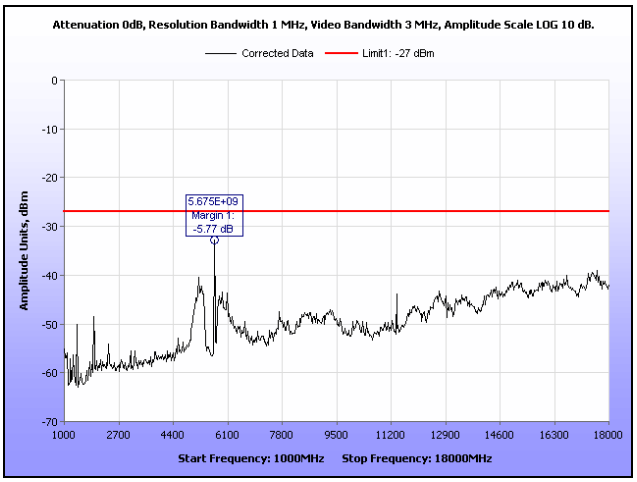
Plot 1132. Radiated Spurious Emissions, 802.11n 20 MHz, 5320 MHz, 1 GHz – 18 GHz, 8x8



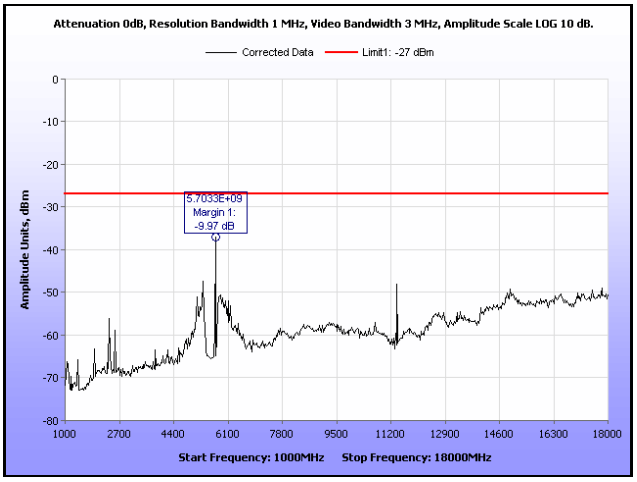
Plot 1133. Radiated Spurious Emissions, 802.11n 20 MHz, 5500 MHz, 1 GHz – 18 GHz, 8x8



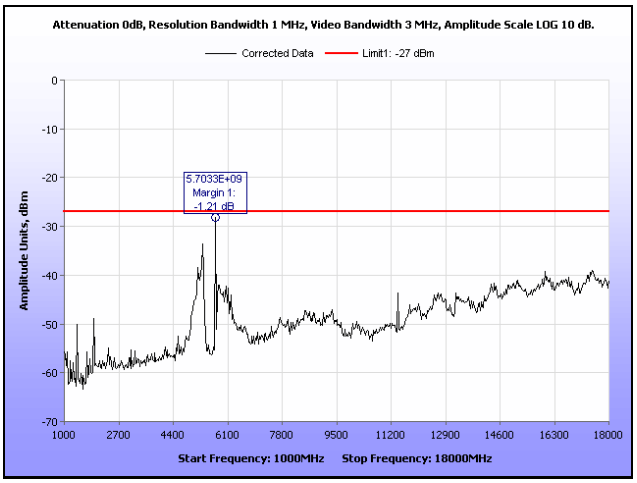
Plot 1134. Radiated Spurious Emissions, 802.11n 20 MHz, 5580 MHz, 1 GHz – 18 GHz, 8x8



Plot 1135. Radiated Spurious Emissions, 802.11n 20 MHz, 5680 MHz, 1 GHz – 18 GHz, 8x8

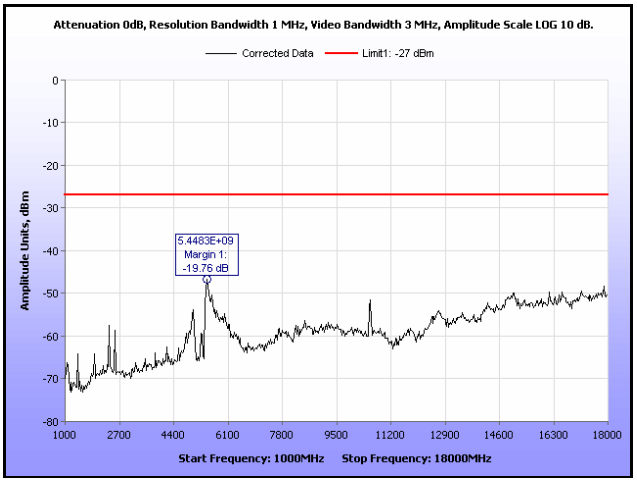


Plot 1136. Radiated Spurious Emissions, 802.11n 20 MHz, 5700 MHz, 1 GHz – 18 GHz, 8x8

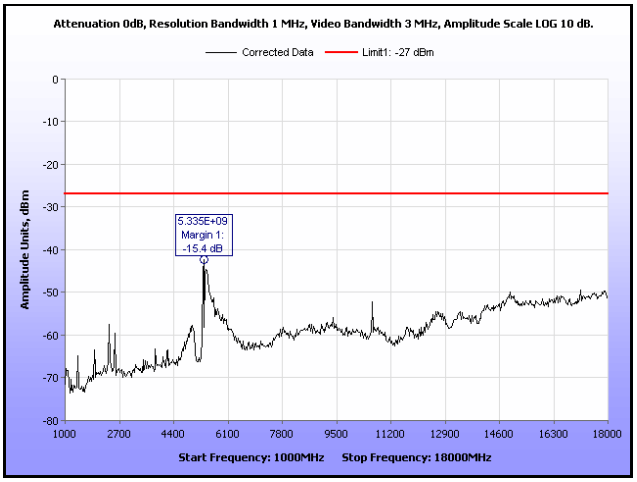


Plot 1137. Radiated Spurious Emissions, 802.11n 20 MHz, 5720 MHz, 1 GHz – 18 GHz, 8x8

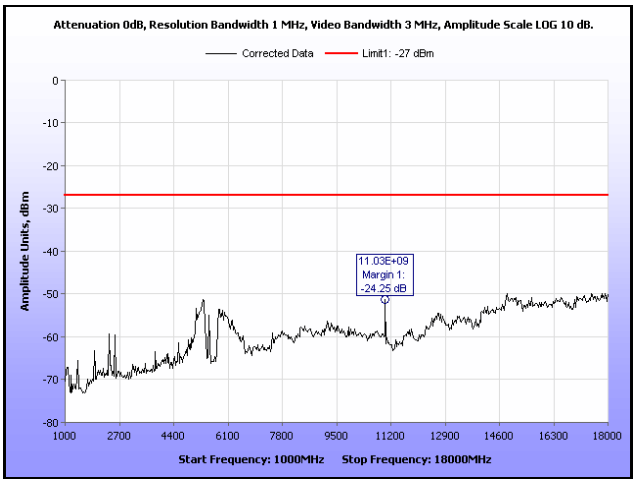
Radiated Spurious Emissions, 802.11n 40 MHz



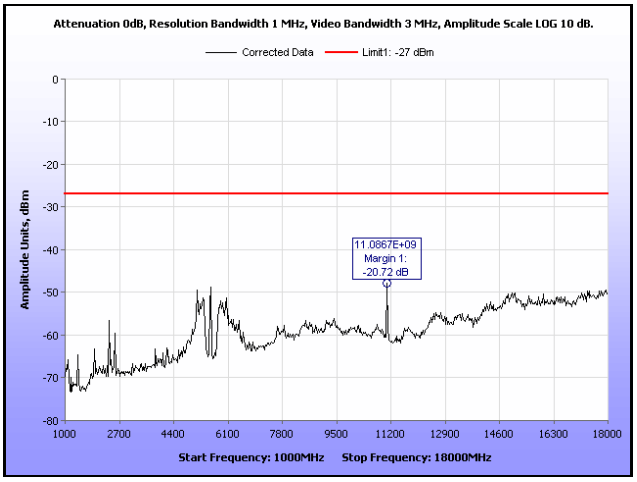
Plot 1138. Radiated Spurious Emissions, 802.11n 40 MHz, 5270 MHz, 1 GHz – 18 GHz, 8x8



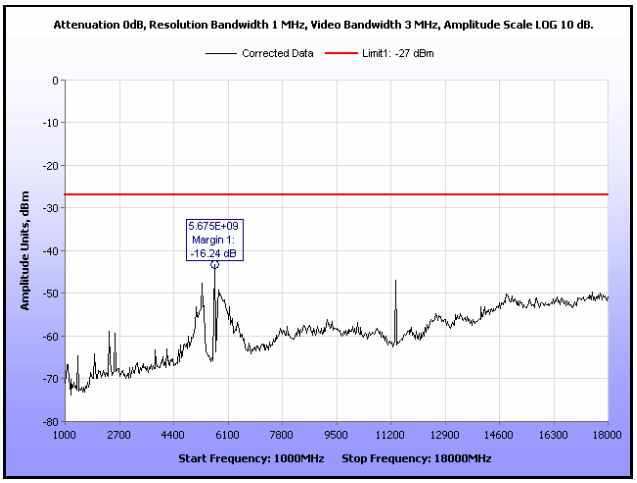
Plot 1139. Radiated Spurious Emissions, 802.11n 40 MHz, 5310 MHz, 1 GHz – 18 GHz, 8x8



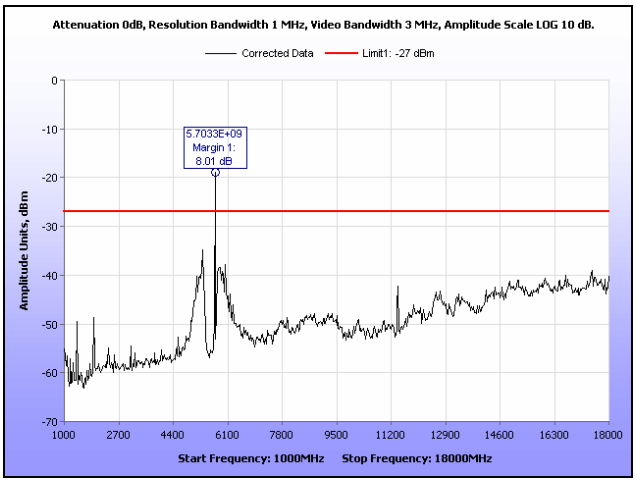
Plot 1140. Radiated Spurious Emissions, 802.11n 40 MHz, 5510 MHz, 1 GHz – 18 GHz, 8x8



Plot 1141. Radiated Spurious Emissions, 802.11n 40 MHz, 5550 MHz, 1 GHz – 18 GHz, 8x8

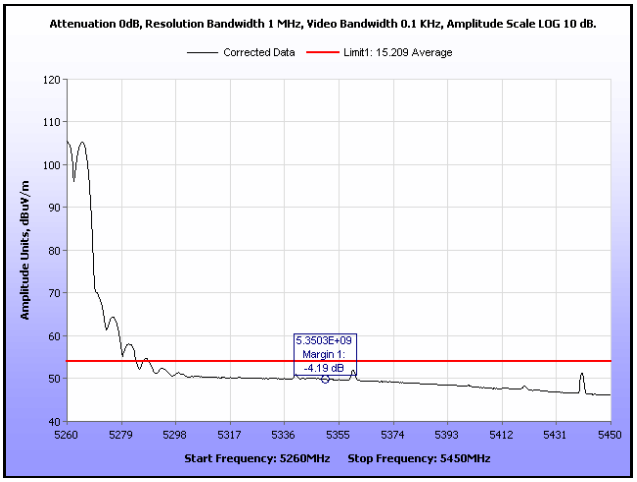


Plot 1142. Radiated Spurious Emissions, 802.11n 40 MHz, 5670 MHz, 1 GHz – 18 GHz, 8x8

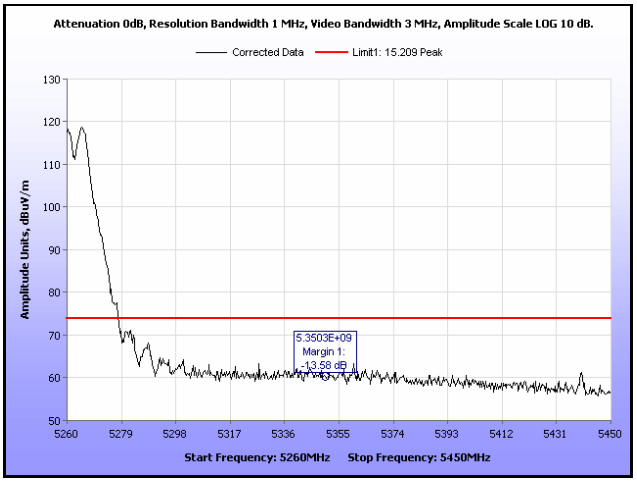


Plot 1143. Radiated Spurious Emissions, 802.11n 40 MHz, 5710 MHz, 1 GHz – 18 GHz, 8x8

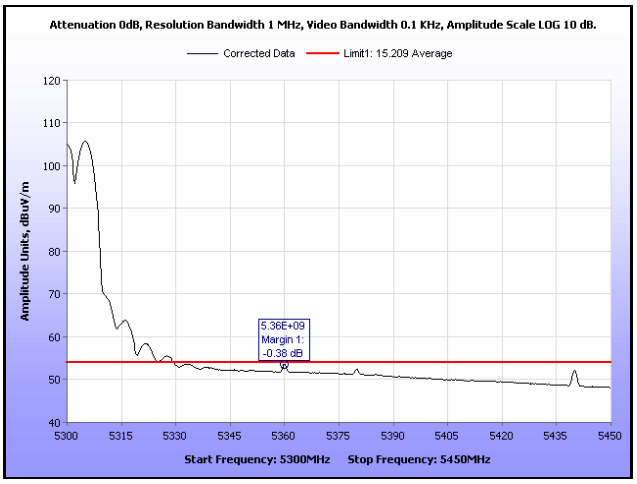
Restricted Band Edge, 802.11a



Plot 1144. Restricted Band Edge, 802.11a, 5260 MHz, Average, 4x8



Plot 1145. Restricted Band Edge, 802.11a, 5260 MHz, Peak, 4x8



Plot 1146. Restricted Band Edge, 802.11a, 5300 MHz, Average, 4x8

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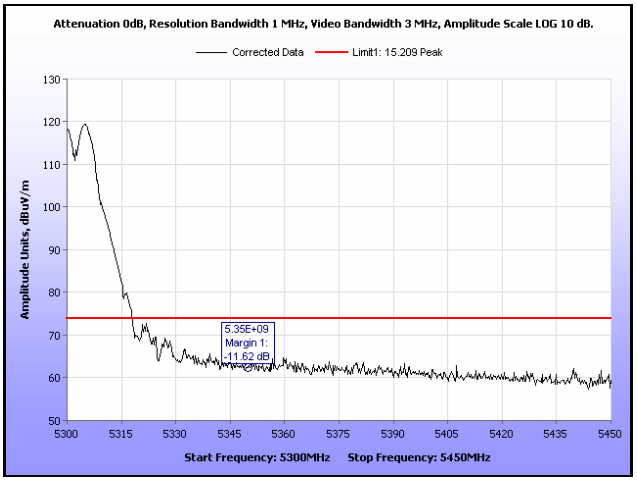
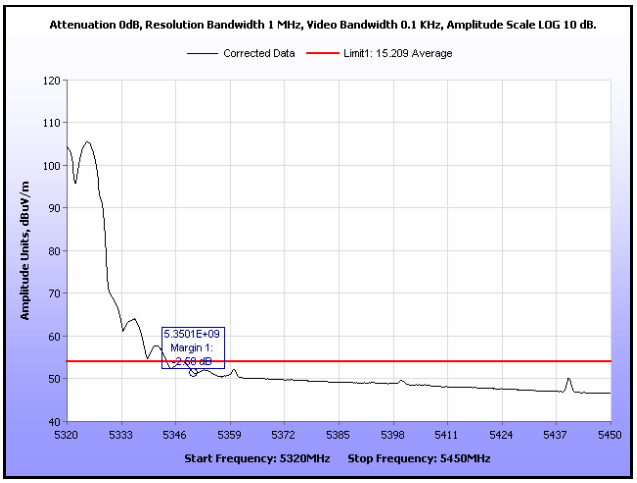
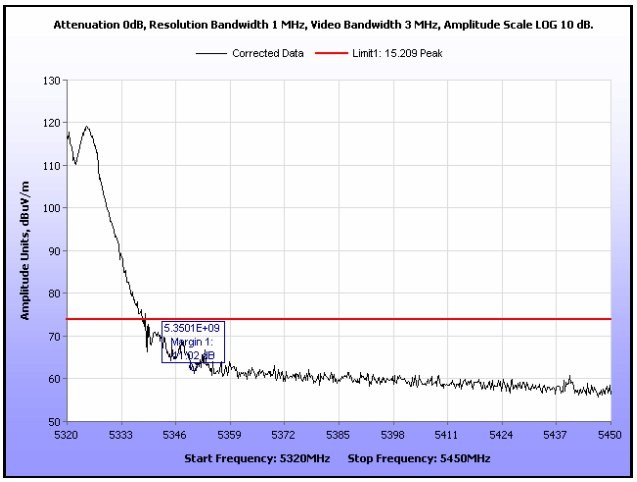


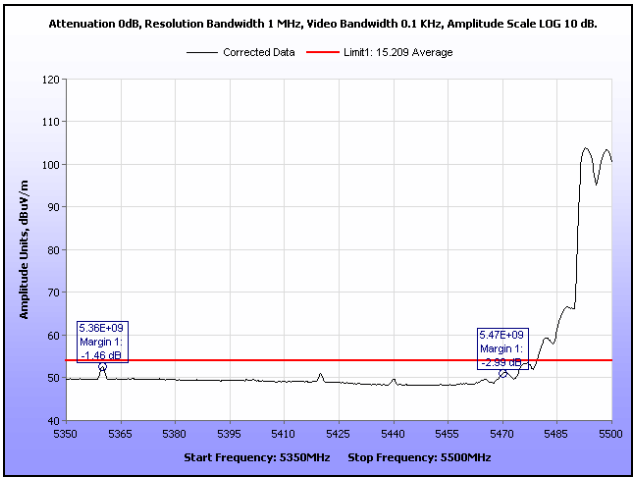
Plot 1147. Restricted Band Edge, 802.11a, 5300 MHz, Peak, 4x8



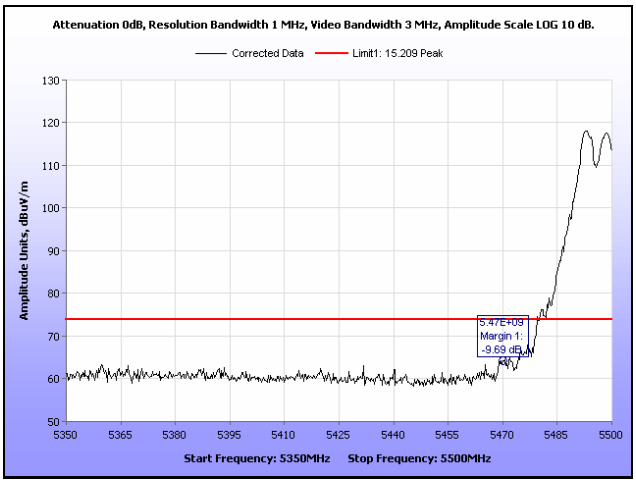
Plot 1148. Restricted Band Edge, 802.11a, 5320 MHz, Average, 4x8



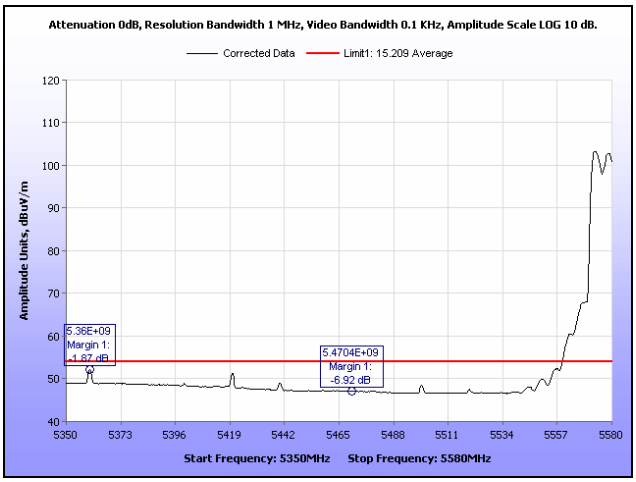
Plot 1149. Restricted Band Edge, 802.11a, 5320 MHz, Peak, 4x8



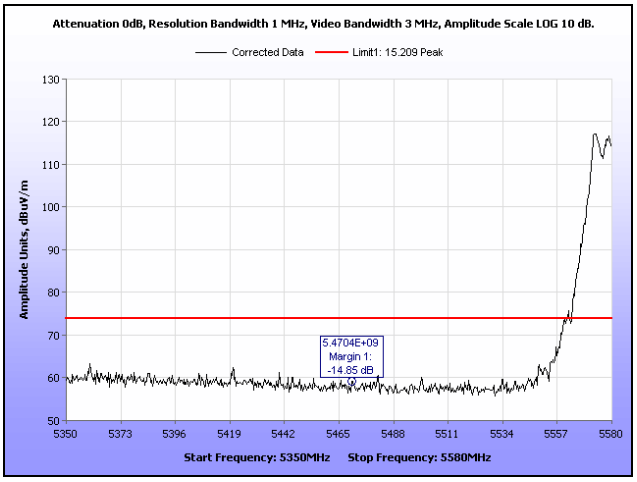
Plot 1150. Restricted Band Edge, 802.11a, 5500 MHz, Average, 4x8



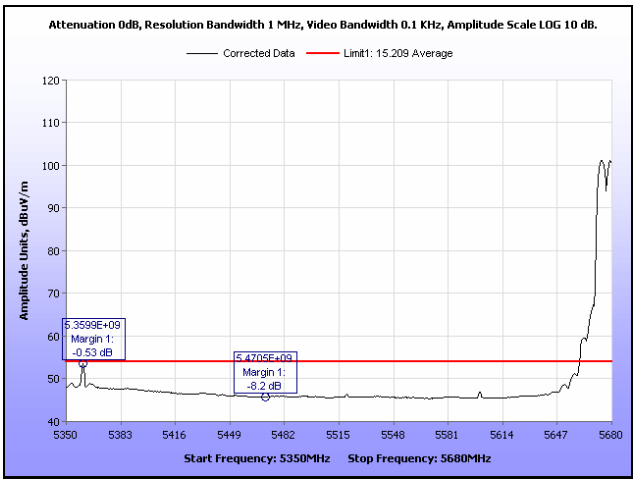
Plot 1151. Restricted Band Edge, 802.11a, 5500 MHz, Peak, 4x8



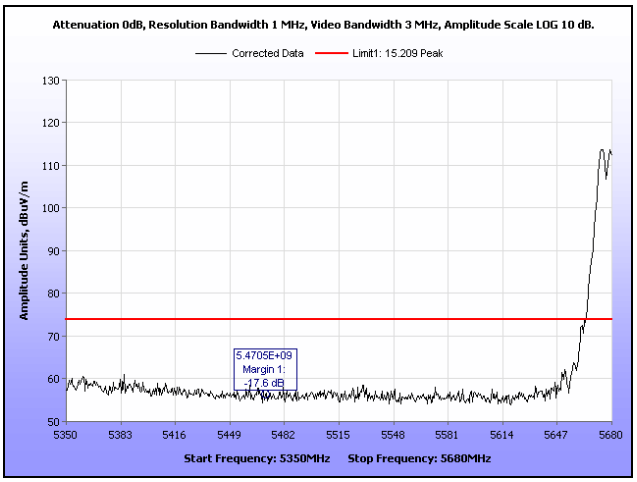
Plot 1152. Restricted Band Edge, 802.11a, 5580 MHz, Average, 4x8



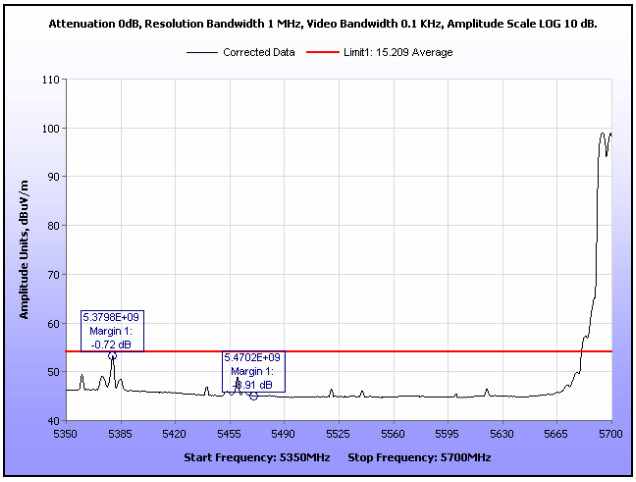
Plot 1153. Restricted Band Edge, 802.11a, 5580 MHz, Peak, 4x8



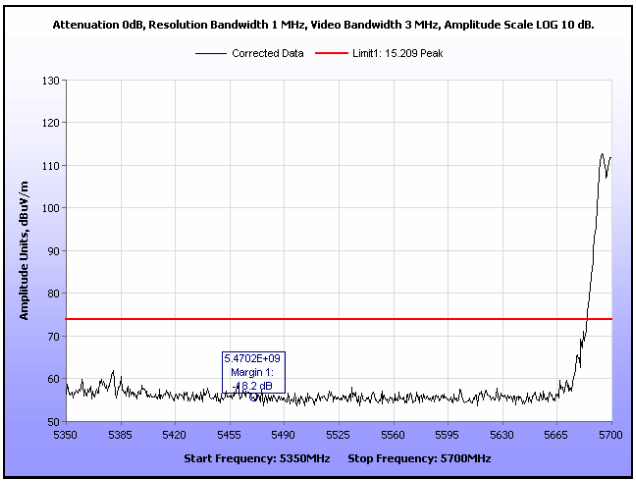
Plot 1154. Restricted Band Edge, 802.11a, 5680 MHz, Average, 4x8



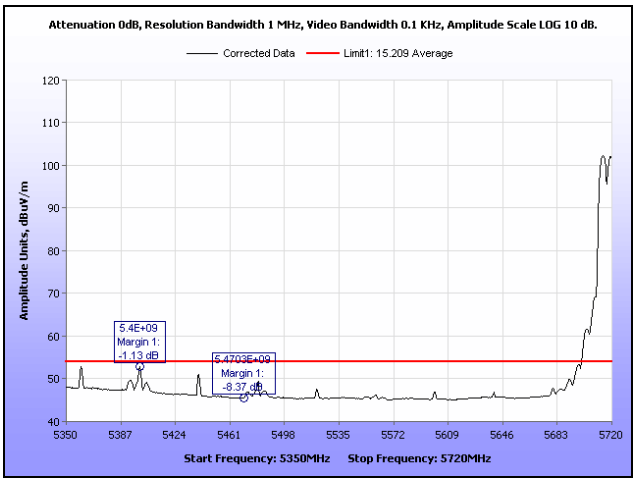
Plot 1155. Restricted Band Edge, 802.11a, 5680 MHz, Peak, 4x8



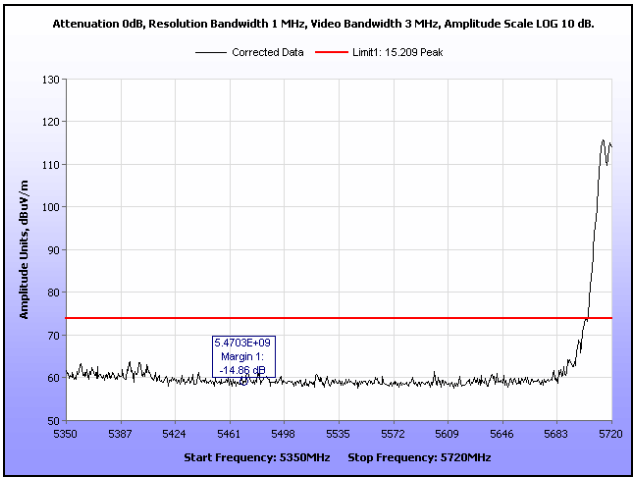
Plot 1156. Restricted Band Edge, 802.11a, 5700 MHz, Average, 4x8



Plot 1157. Restricted Band Edge, 802.11a, 5700 MHz, Peak, 4x8

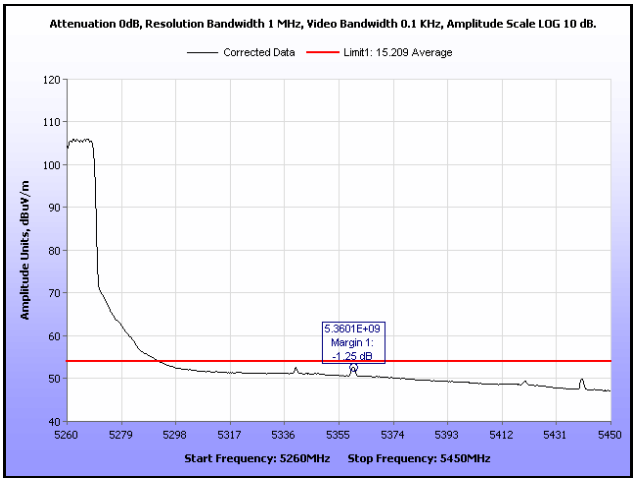


Plot 1158. Restricted Band Edge, 802.11a, 5720 MHz, Average, 4x8

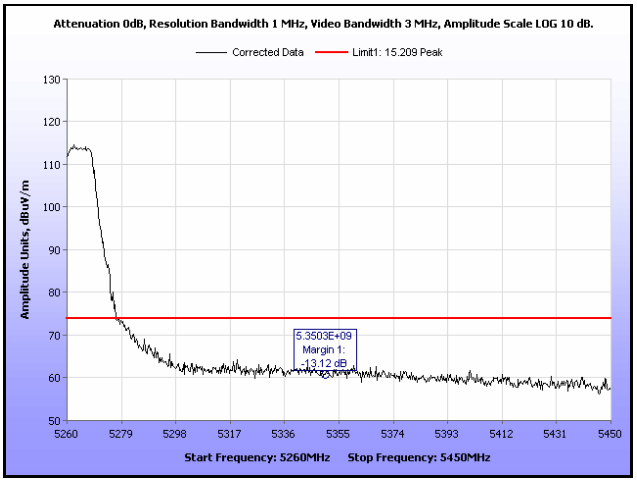


Plot 1159. Restricted Band Edge, 802.11a, 5720 MHz, Peak, 4x8

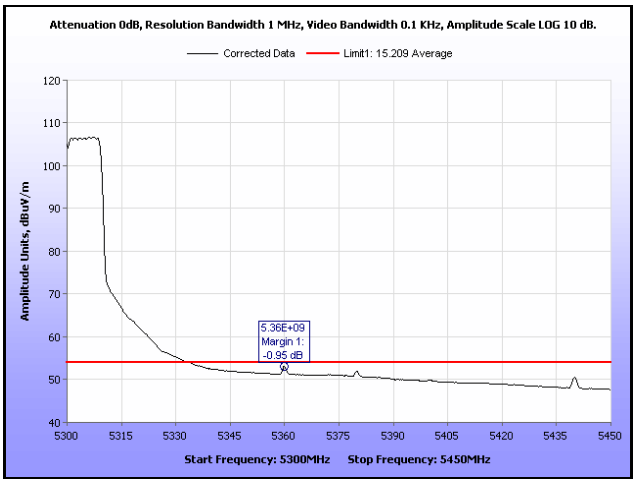
Restricted Band Edge, 802.11ac 20 MHz



Plot 1160. Restricted Band Edge, 802.11ac 20 MHz, 5260 MHz, Average, 4x8



Plot 1161. Restricted Band Edge, 802.11ac 20 MHz, 5260 MHz, Peak, 4x8



Plot 1162. Restricted Band Edge, 802.11ac 20 MHz, 5300 MHz, Average, 4x8

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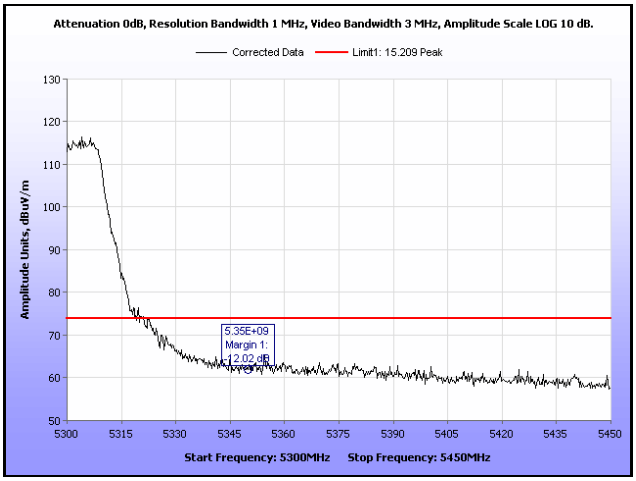
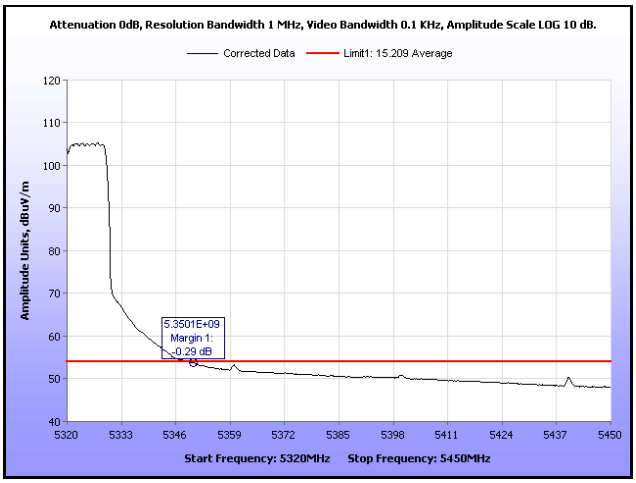
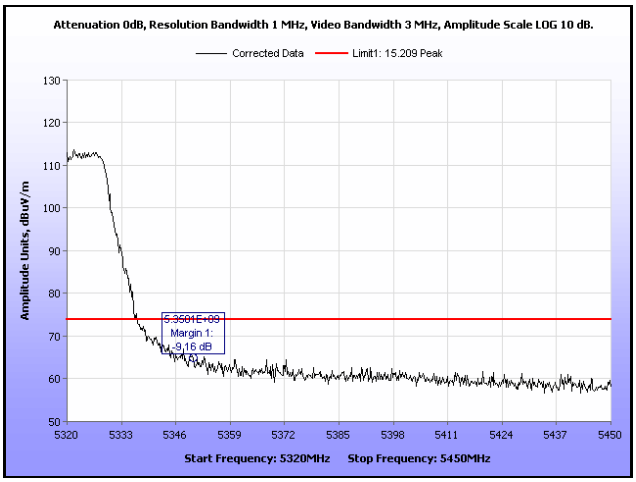


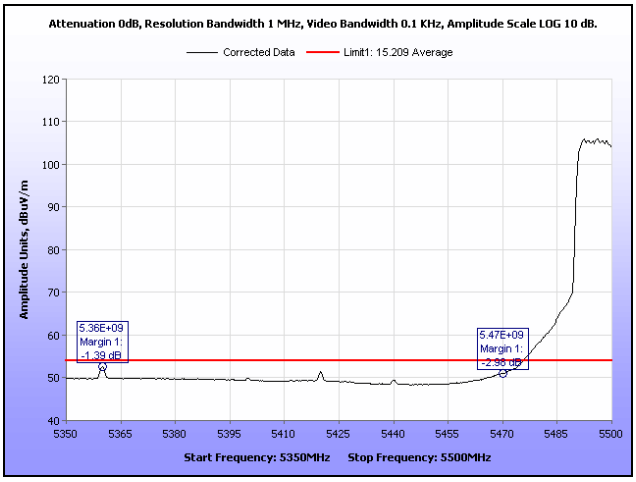
Plot 1163. Restricted Band Edge, 802.11ac 20 MHz, 5300 MHz, Peak, 4x8



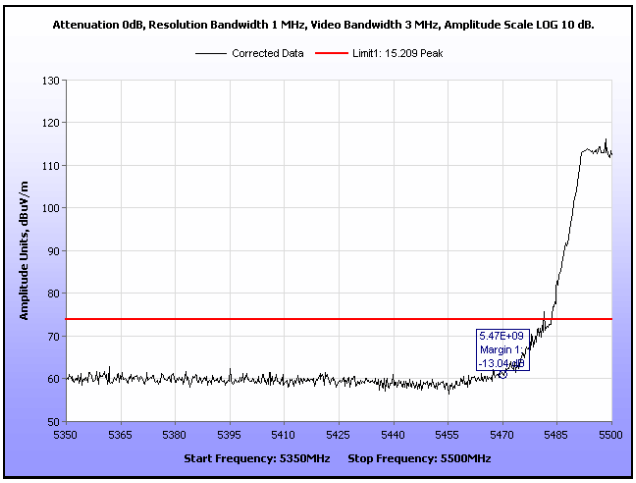
Plot 1164. Restricted Band Edge, 802.11ac 20 MHz, 5320 MHz, Average, 4x8



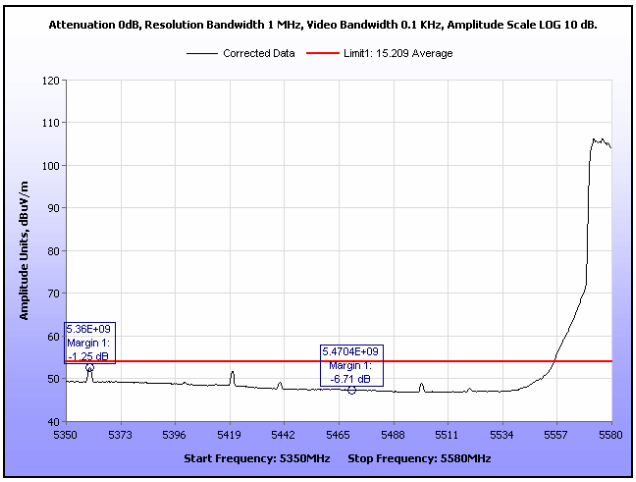
Plot 1165. Restricted Band Edge, 802.11ac 20 MHz, 5320 MHz, Peak, 4x8



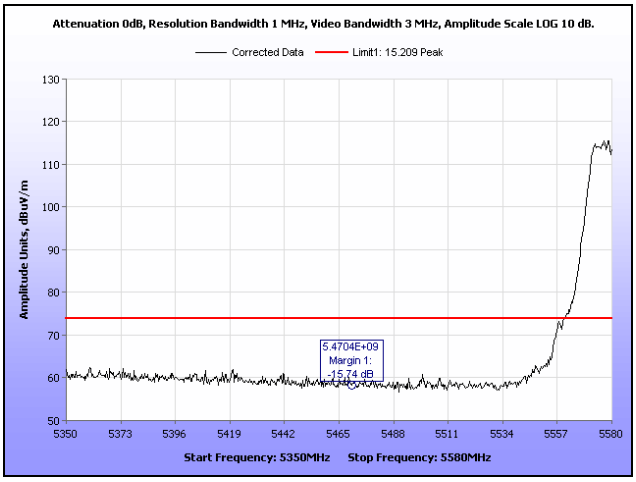
Plot 1166. Restricted Band Edge, 802.11ac 20 MHz, 5500 MHz, Average, 4x8



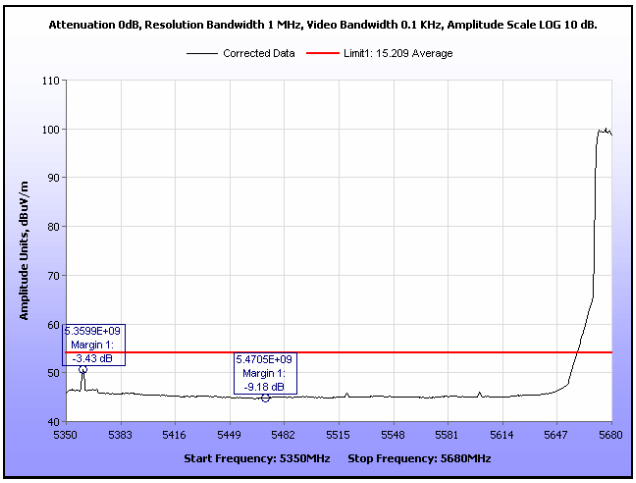
Plot 1167. Restricted Band Edge, 802.11ac 20 MHz, 5500 MHz, Peak, 4x8



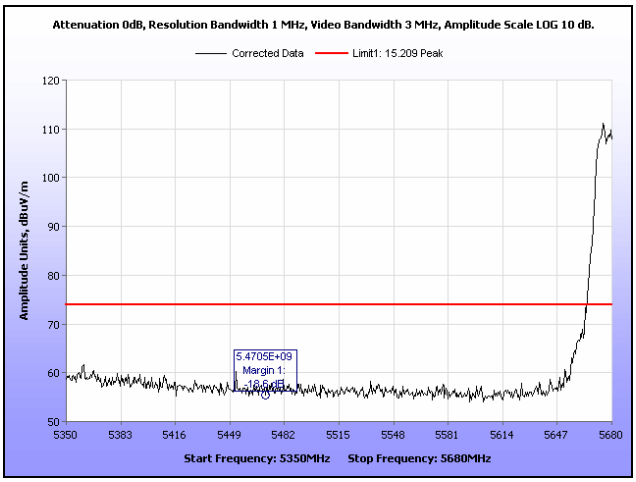
Plot 1168. Restricted Band Edge, 802.11ac 20 MHz, 5580 MHz, Average, 4x8



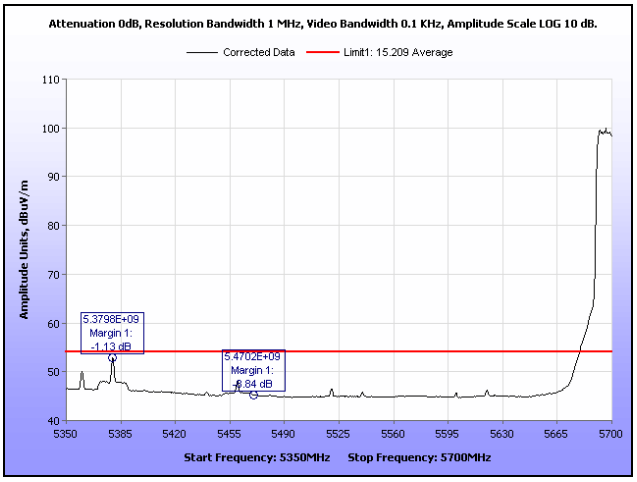
Plot 1169. Restricted Band Edge, 802.11ac 20 MHz, 5580 MHz, Peak, 4x8



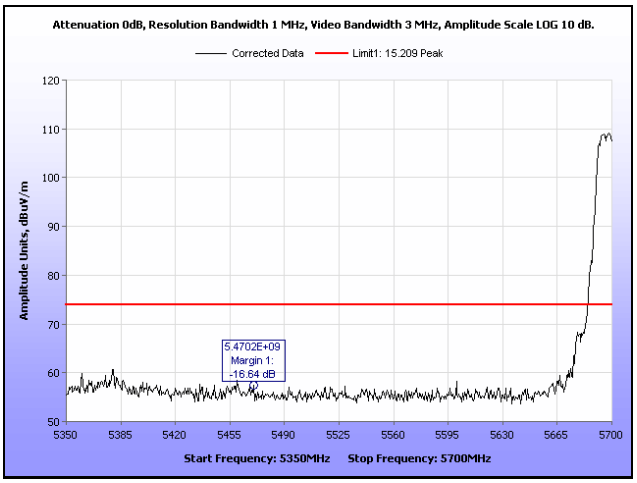
Plot 1170. Restricted Band Edge, 802.11ac 20 MHz, 5680 MHz, Average, 4x8



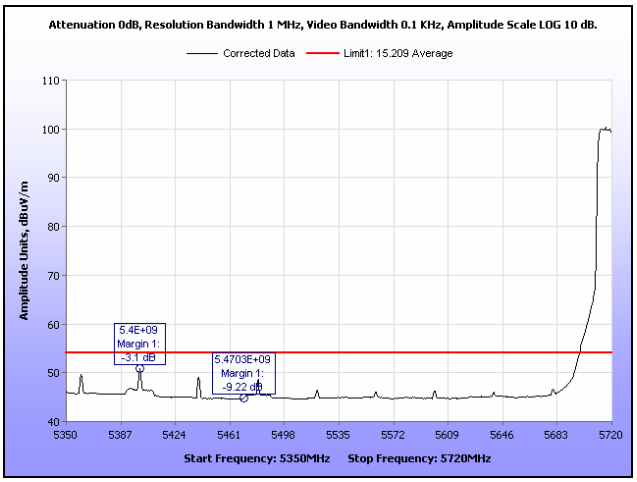
Plot 1171. Restricted Band Edge, 802.11ac 20 MHz, 5680 MHz, Peak, 4x8



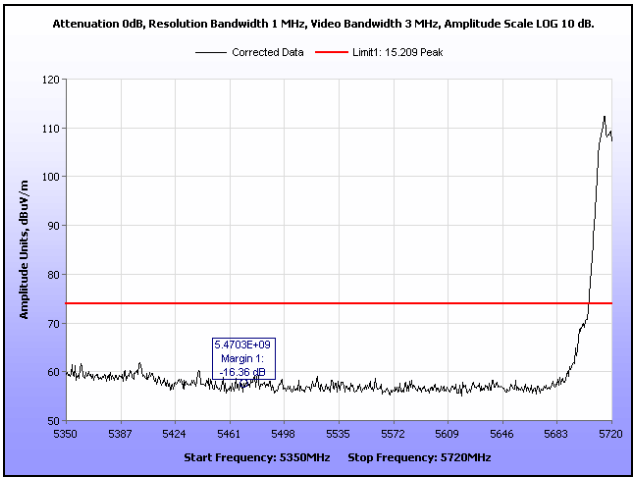
Plot 1172. Restricted Band Edge, 802.11ac 20 MHz, 5700 MHz, Average, 4x8



Plot 1173. Restricted Band Edge, 802.11ac 20 MHz, 5700 MHz, Peak, 4x8

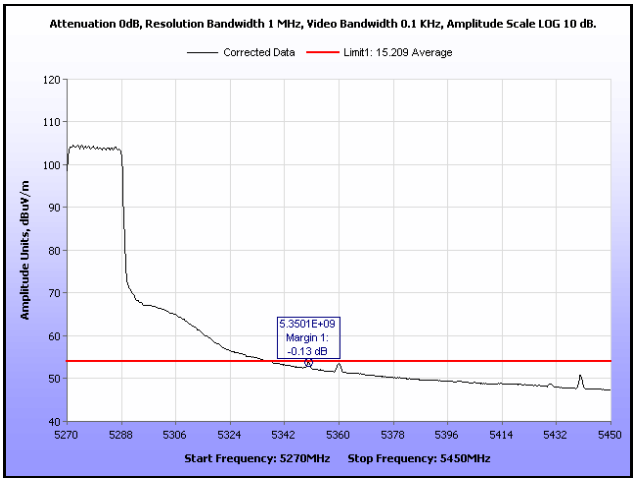


Plot 1174. Restricted Band Edge, 802.11ac 20 MHz, 5720 MHz, Average, 4x8

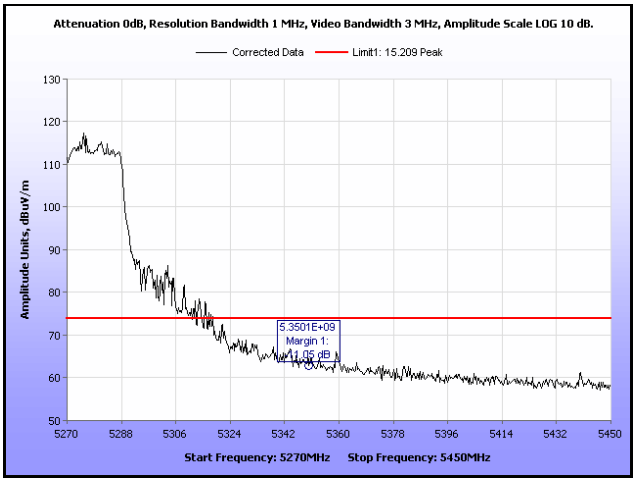


Plot 1175. Restricted Band Edge, 802.11ac 20 MHz, 5720 MHz, Peak, 4x8

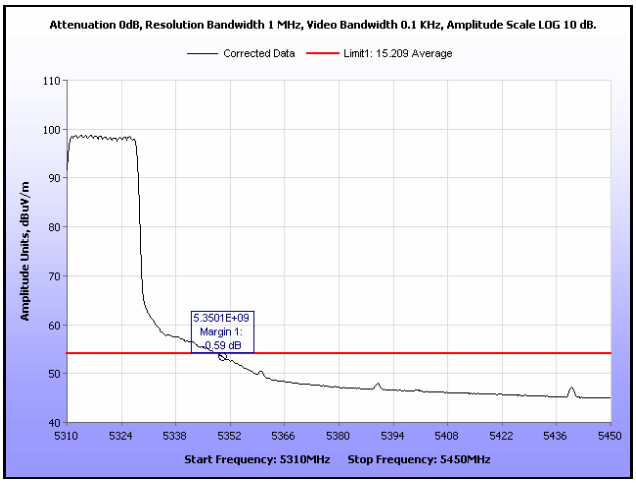
Restricted Band Edge, 802.11ac 40 MHz



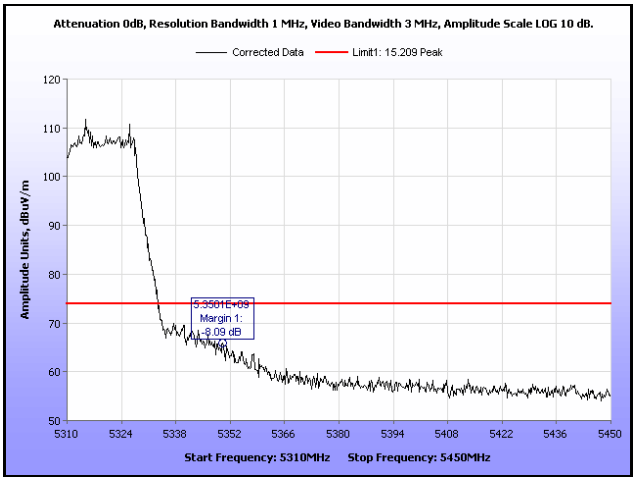
Plot 1176. Restricted Band Edge, 802.11ac 40 MHz, 5270 MHz, Average, 4x8



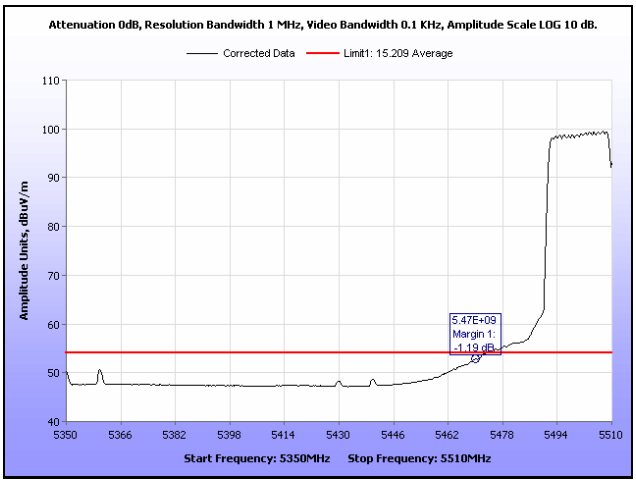
Plot 1177. Restricted Band Edge, 802.11ac 40 MHz, 5270 MHz, Peak, 4x8



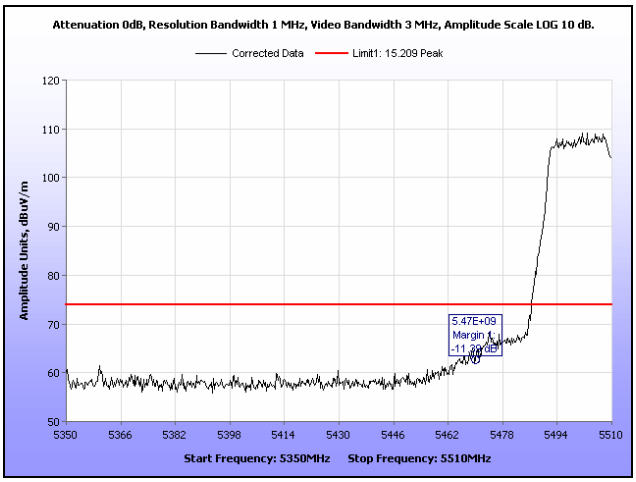
Plot 1178. Restricted Band Edge, 802.11ac 40 MHz, 5310 MHz, Average, 4x8



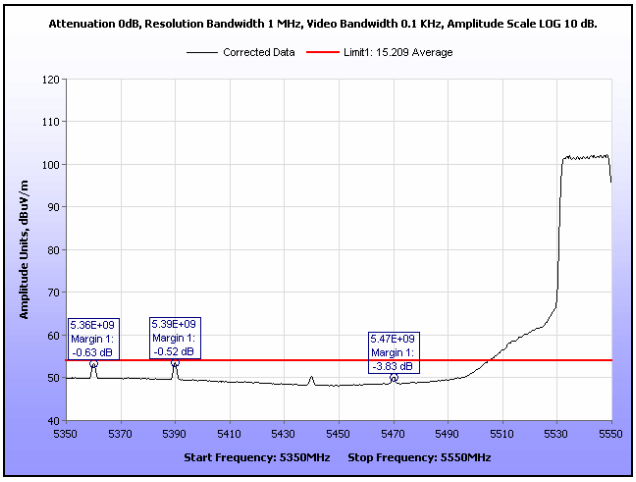
Plot 1179. Restricted Band Edge, 802.11ac 40 MHz, 5310 MHz, Peak, 4x8



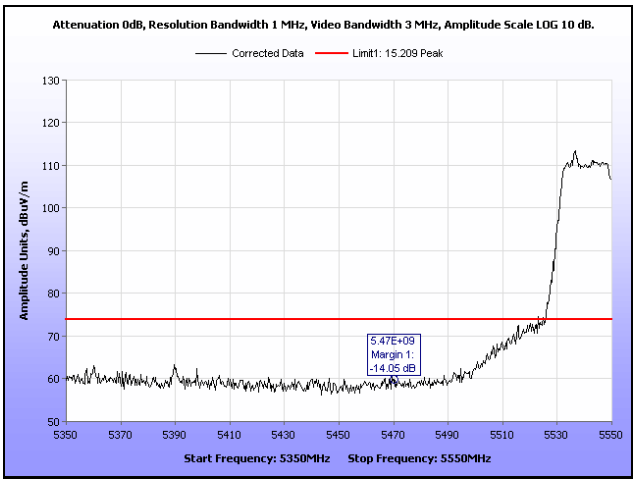
Plot 1180. Restricted Band Edge, 802.11ac 40 MHz, 5510 MHz, Average, 4x8



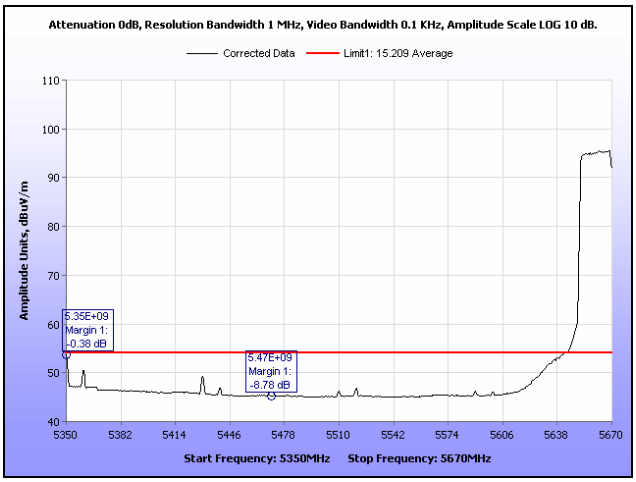
Plot 1181. Restricted Band Edge, 802.11ac 40 MHz, 5510 MHz, Peak, 4x8



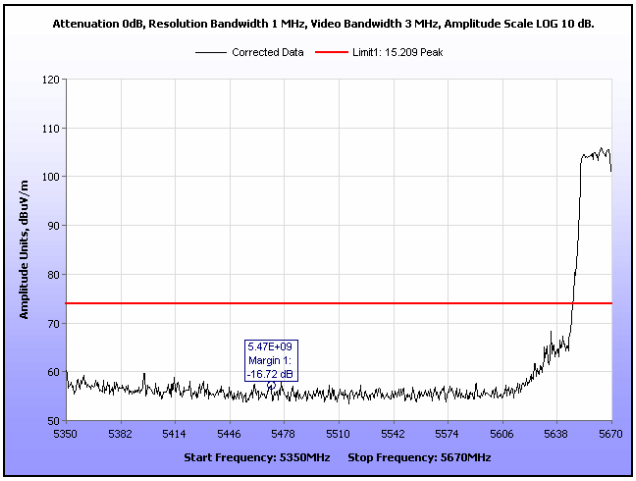
Plot 1182. Restricted Band Edge, 802.11ac 40 MHz, 5550 MHz, Average, 4x8



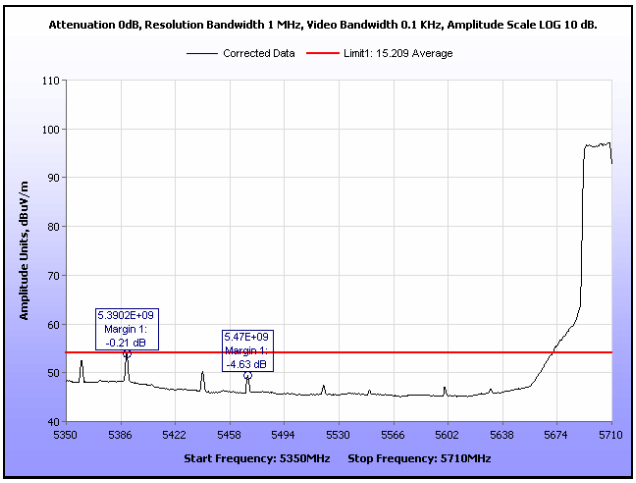
Plot 1183. Restricted Band Edge, 802.11ac 40 MHz, 5550 MHz, Peak, 4x8



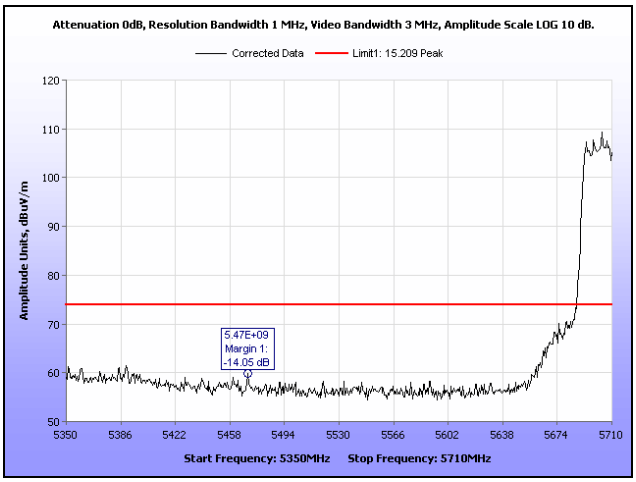
Plot 1184. Restricted Band Edge, 802.11ac 40 MHz, 5670 MHz, Average, 4x8



Plot 1185. Restricted Band Edge, 802.11ac 40 MHz, 5670 MHz, Peak, 4x8

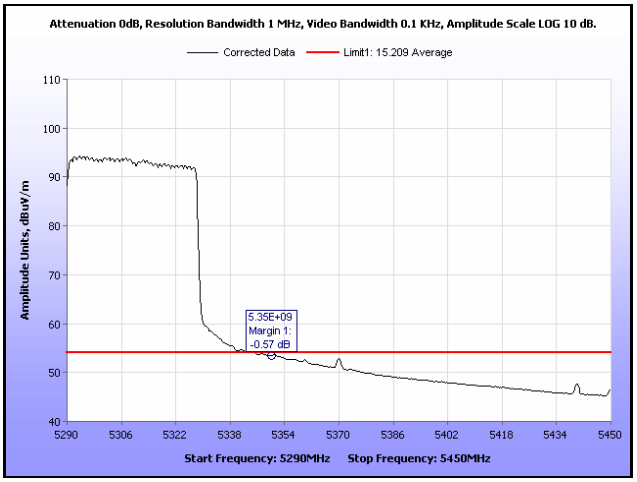


Plot 1186. Restricted Band Edge, 802.11ac 40 MHz, 5710 MHz, Average, 4x8

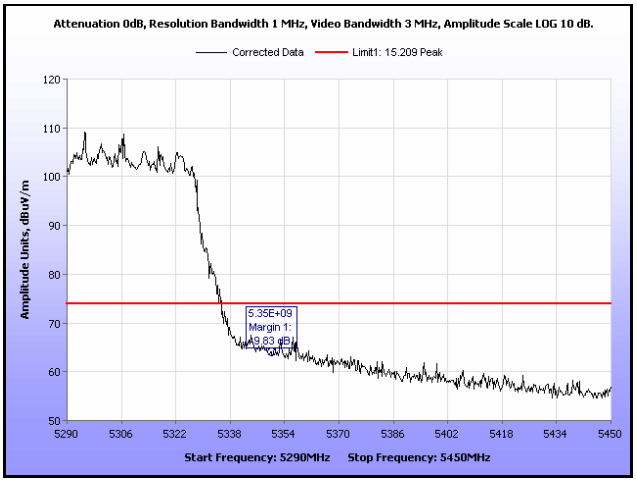


Plot 1187. Restricted Band Edge, 802.11ac 40 MHz, 5710 MHz, Peak, 4x8

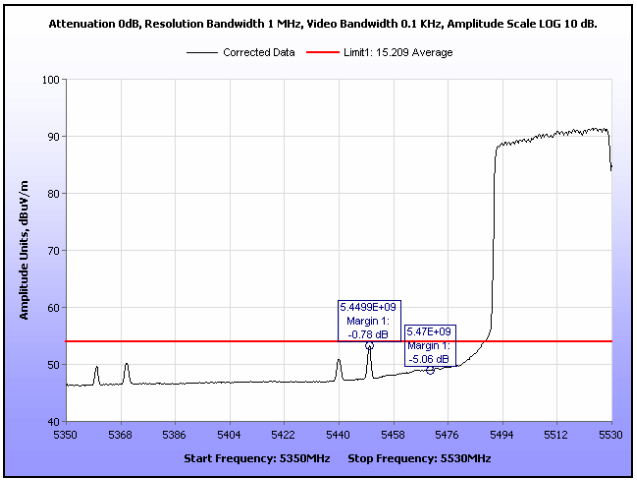
Restricted Band Edge, 802.11ac 80 MHz



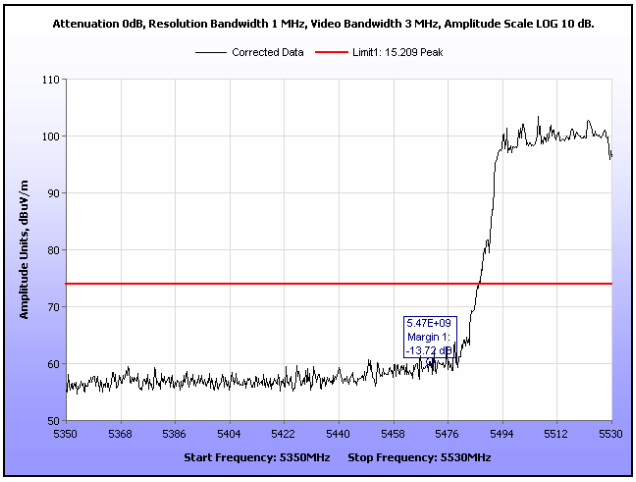
Plot 1188. Restricted Band Edge, 802.11ac 80 MHz, 5290 MHz, Average, 4x8



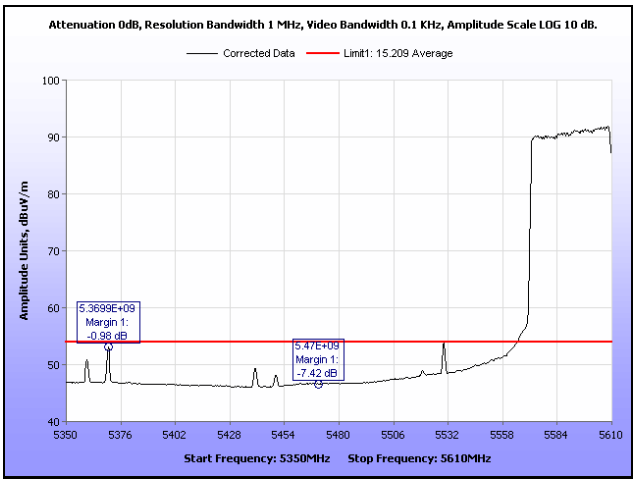
Plot 1189. Restricted Band Edge, 802.11ac 80 MHz, 5290 MHz, Peak, 4x8



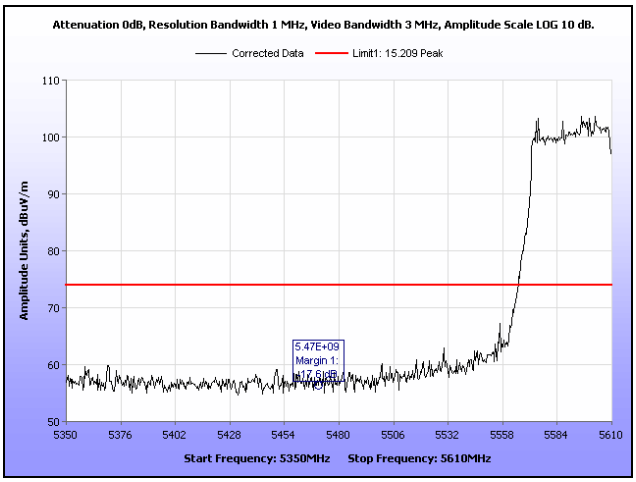
Plot 1190. Restricted Band Edge, 802.11ac 80 MHz, 5530 MHz, Average, 4x8



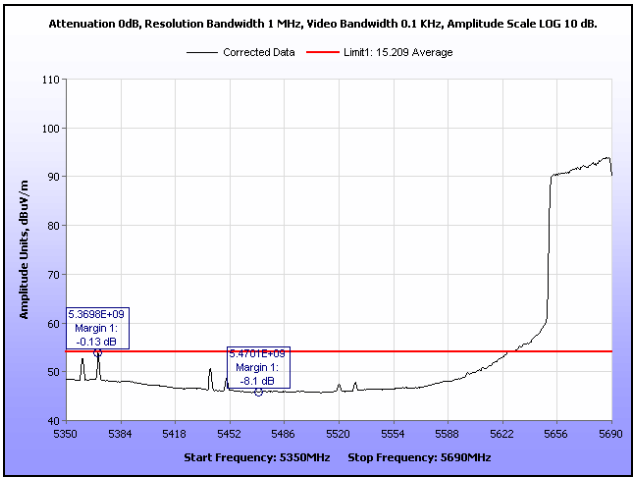
Plot 1191. Restricted Band Edge, 802.11ac 80 MHz, 5530 MHz, Peak, 4x8



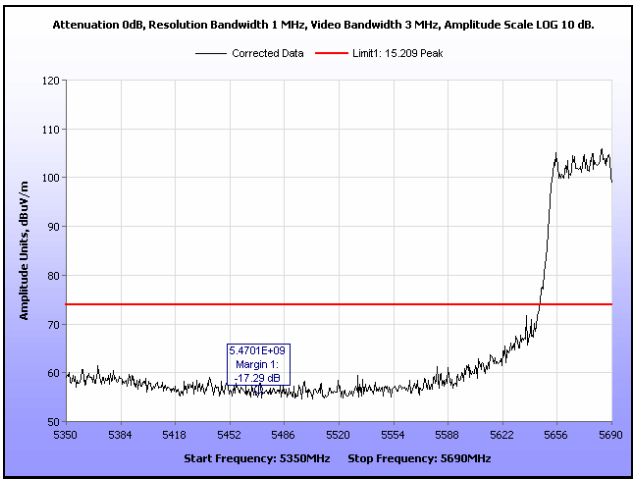
Plot 1192. Restricted Band Edge, 802.11ac 80 MHz, 5610 MHz, Average, 4x8



Plot 1193. Restricted Band Edge, 802.11ac 80 MHz, 5610 MHz, Peak, 4x8



Plot 1194. Restricted Band Edge, 802.11ac 80 MHz, 5690 MHz, Average, 4x8



Plot 1195. Restricted Band Edge, 802.11ac 80 MHz, 5690 MHz, Peak, 4x8

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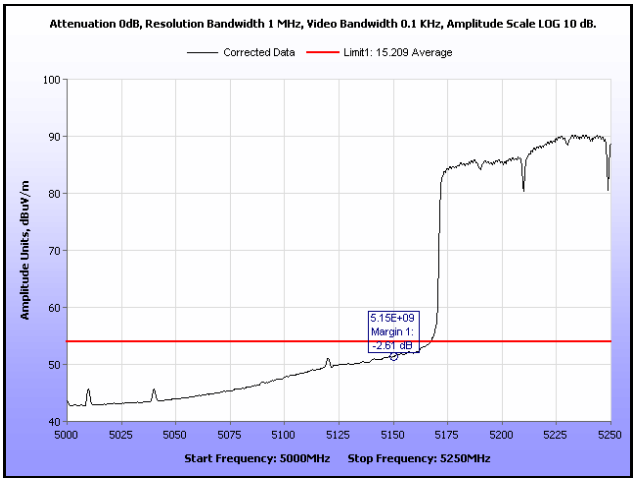
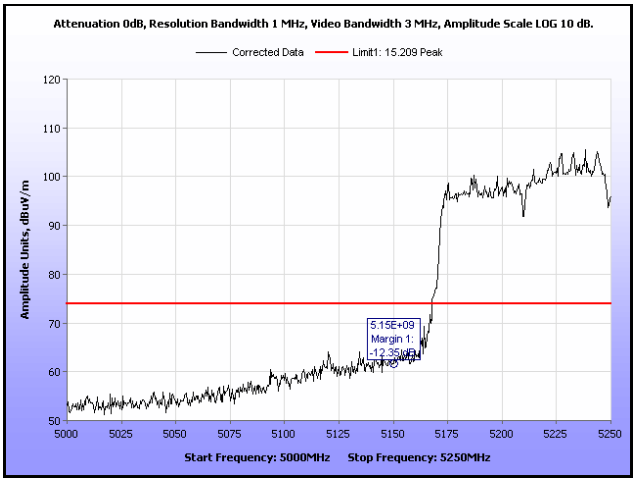
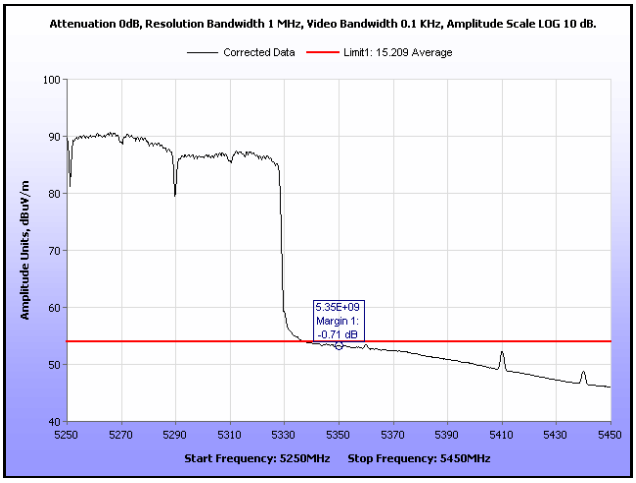
Restricted Band Edge, 802.11ac 160 MHz



Plot 1196. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Average, 4x8, Left



Plot 1197. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Peak, 4x8, Left



Plot 1198. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Average, 4x8, Right

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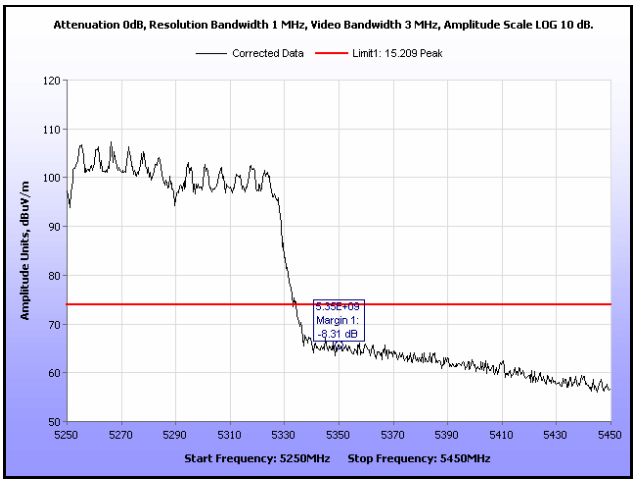
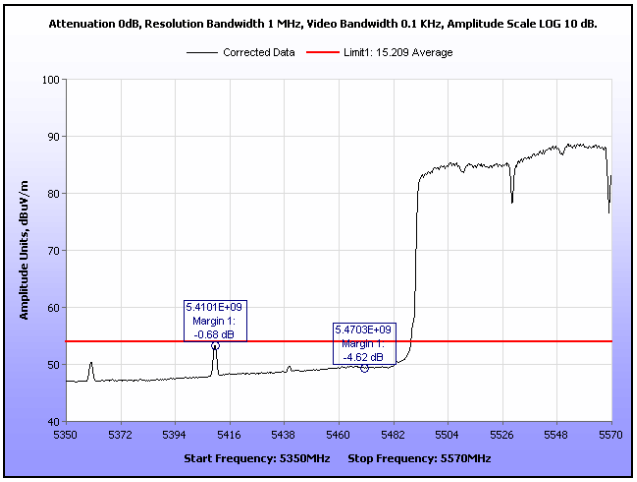


Plot 1199. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Peak, 4x8, Right



Plot 1200. Restricted Band Edge, 802.11ac 160 MHz, 5570 MHz, Average, 4x8

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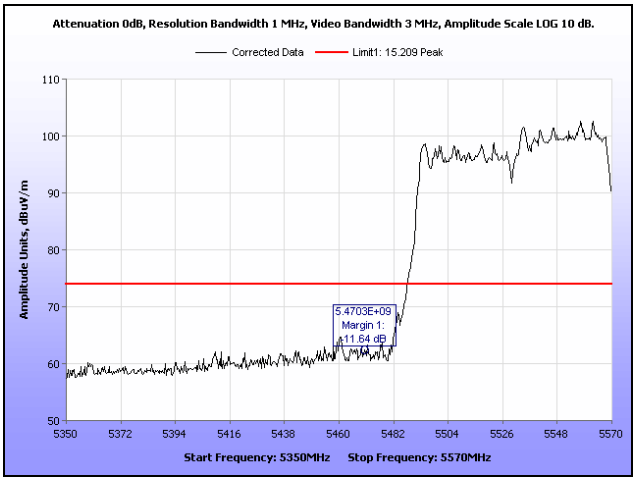
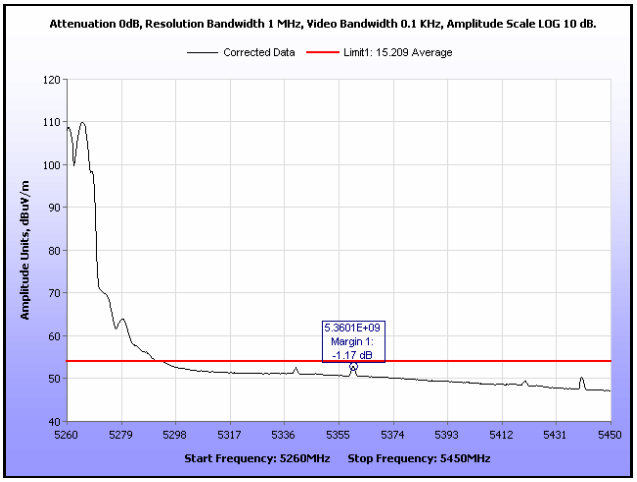
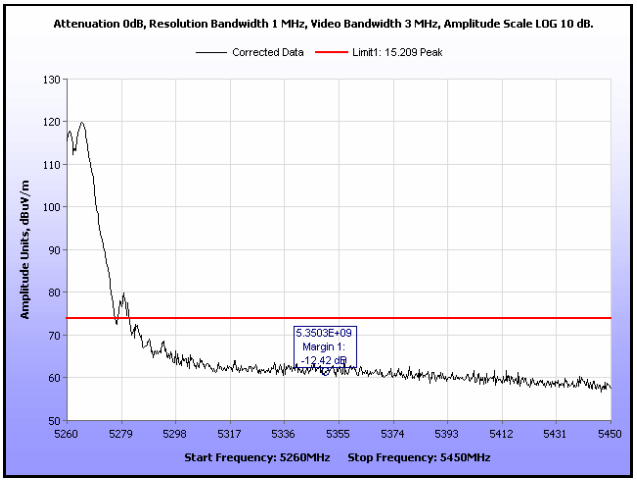


Plot 1201. Restricted Band Edge, 802.11ac 160 MHz, 5570 MHz, Peak, 4x8

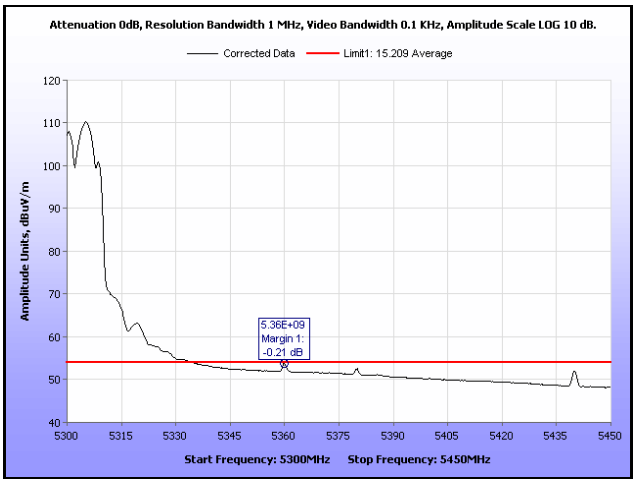
Restricted Band Edge, 802.11n 20 MHz



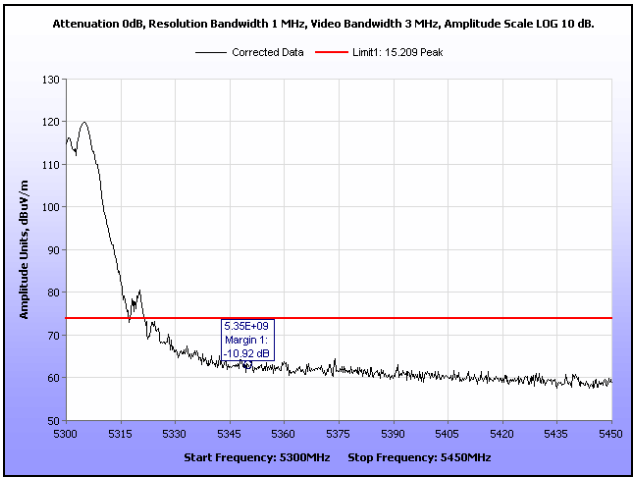
Plot 1202. Restricted Band Edge, 802.11n 20 MHz, 5260 MHz, Average, 4x8



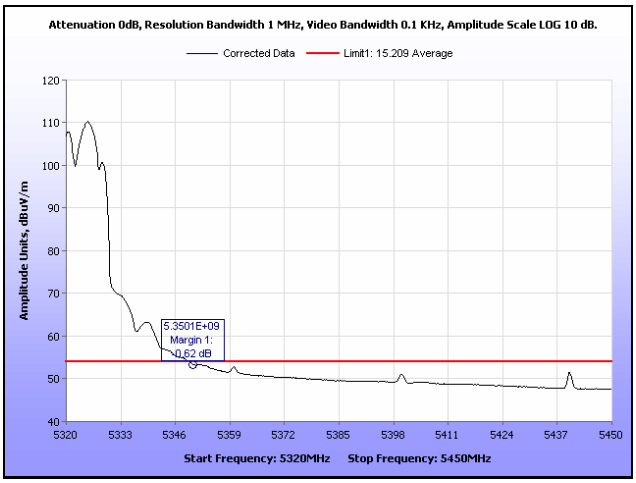
Plot 1203. Restricted Band Edge, 802.11n 20 MHz, 5260 MHz, Peak, 4x8



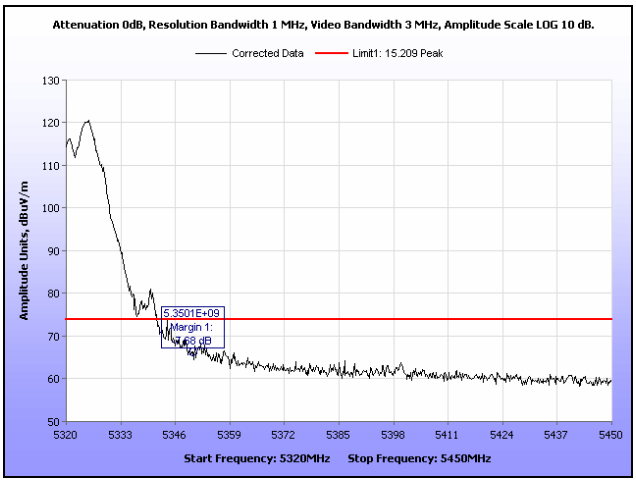
Plot 1204. Restricted Band Edge, 802.11n 20 MHz, 5300 MHz, Average, 4x8



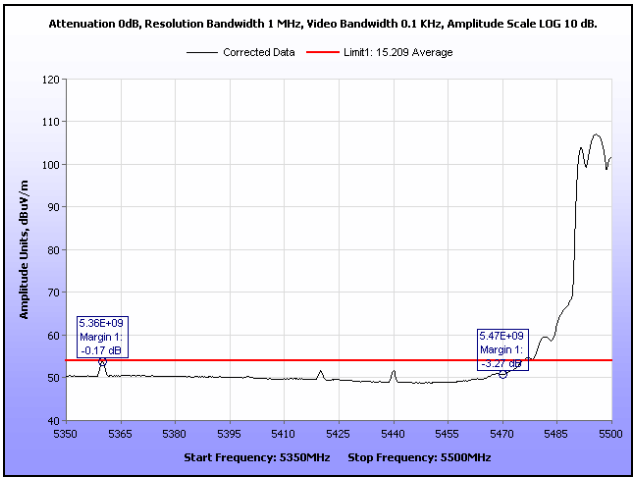
Plot 1205. Restricted Band Edge, 802.11n 20 MHz, 5300 MHz, Peak, 4x8



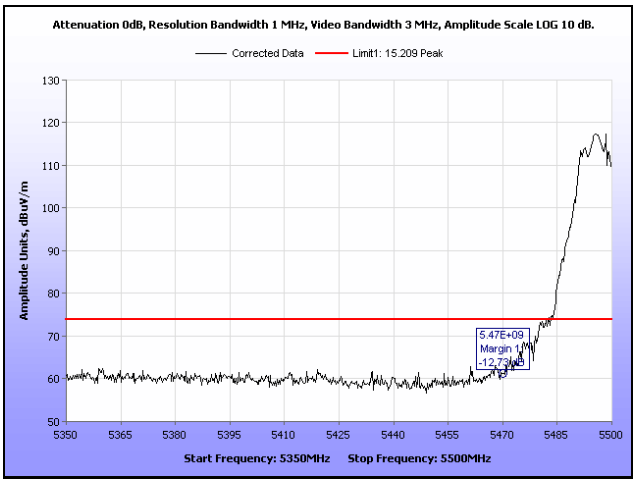
Plot 1206. Restricted Band Edge, 802.11n 20 MHz, 5320 MHz, Average, 4x8



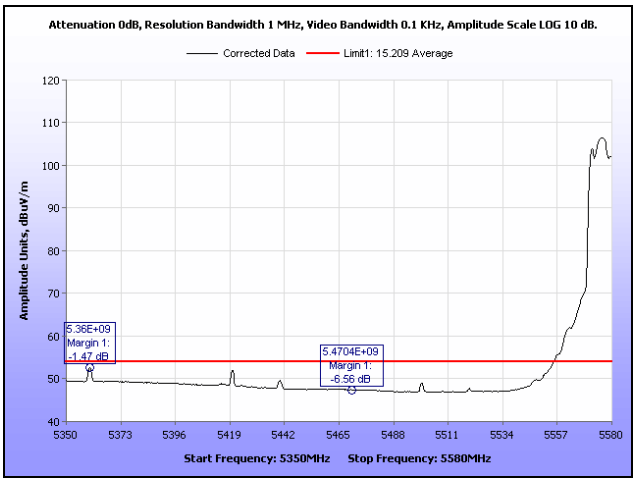
Plot 1207. Restricted Band Edge, 802.11n 20 MHz, 5320 MHz, Peak, 4x8



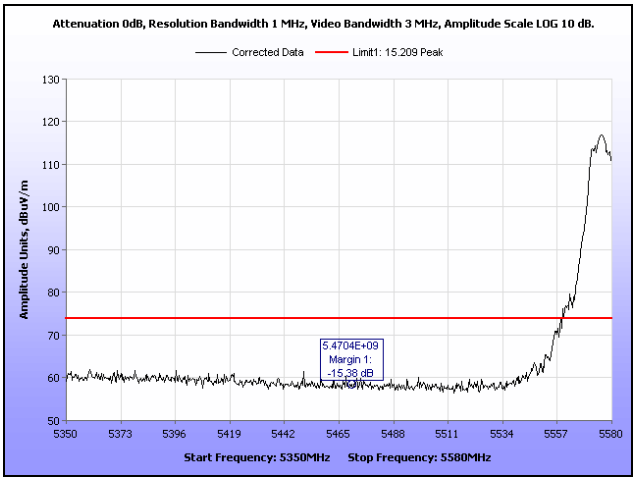
Plot 1208. Restricted Band Edge, 802.11n 20 MHz, 5500 MHz, Average, 4x8



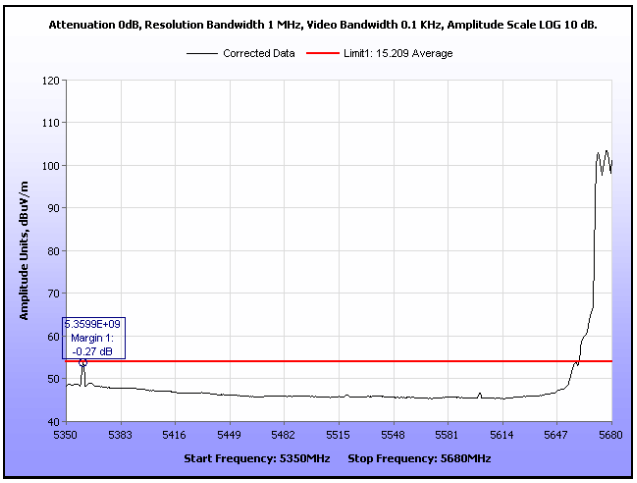
Plot 1209. Restricted Band Edge, 802.11n 20 MHz, 5500 MHz, Peak, 4x8



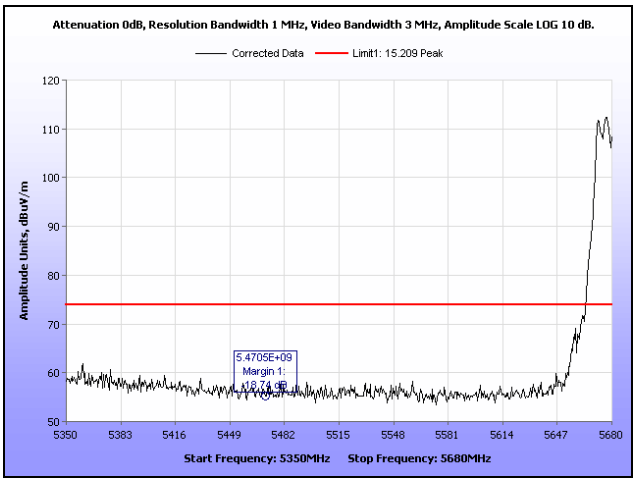
Plot 1210. Restricted Band Edge, 802.11n 20 MHz, 5580 MHz, Average, 4x8



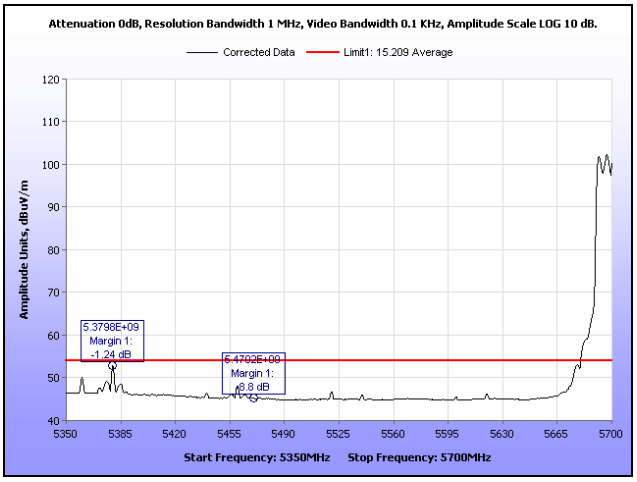
Plot 1211. Restricted Band Edge, 802.11n 20 MHz, 5580 MHz, Peak, 4x8



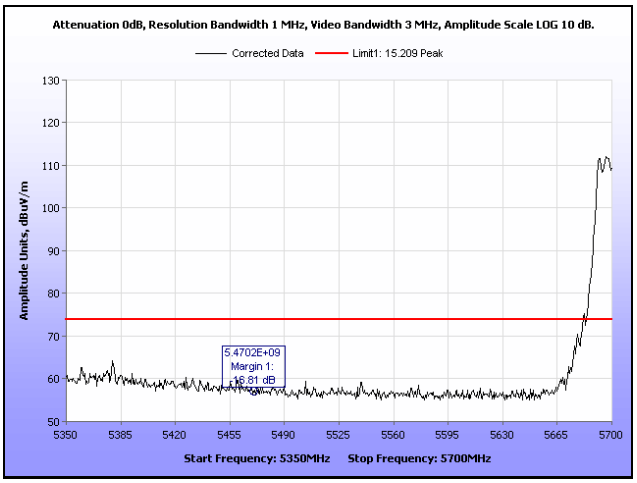
Plot 1212. Restricted Band Edge, 802.11n 20 MHz, 5680 MHz, Average, 4x8



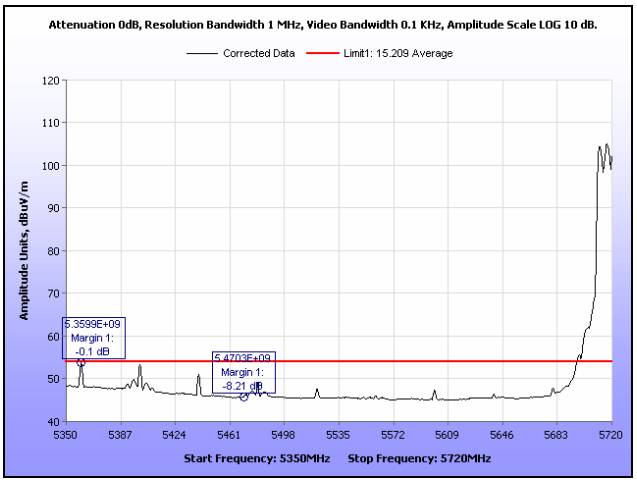
Plot 1213. Restricted Band Edge, 802.11n 20 MHz, 5680 MHz, Peak, 4x8



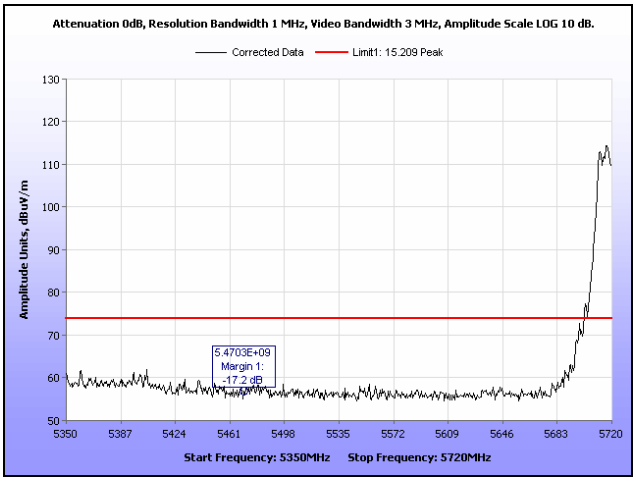
Plot 1214. Restricted Band Edge, 802.11n 20 MHz, 5700 MHz, Average, 4x8



Plot 1215. Restricted Band Edge, 802.11n 20 MHz, 5700 MHz, Peak, 4x8

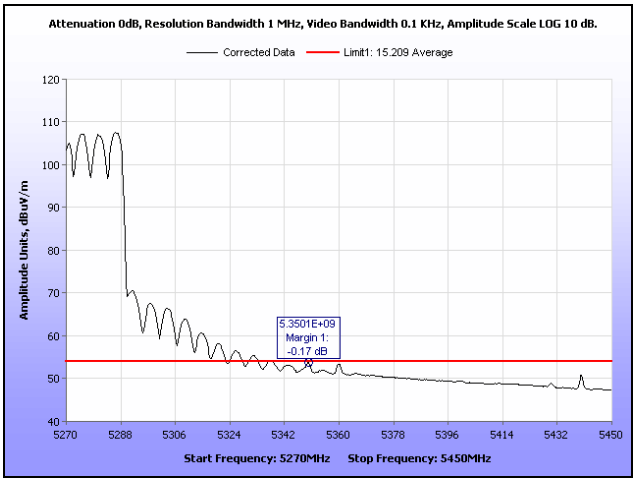


Plot 1216. Restricted Band Edge, 802.11n 20 MHz, 5720 MHz, Average, 4x8

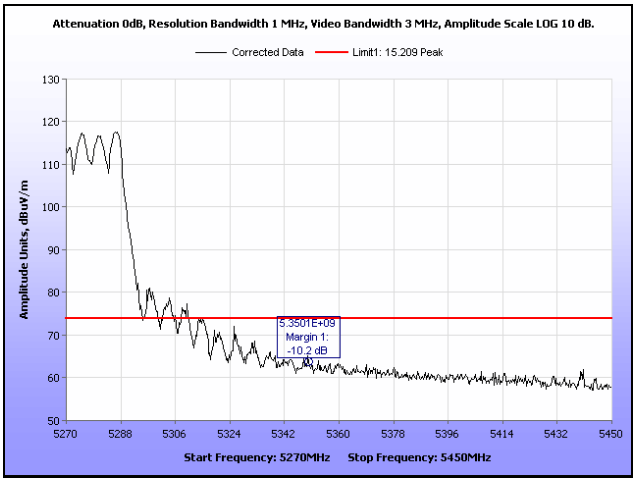


Plot 1217. Restricted Band Edge, 802.11n 20 MHz, 5720 MHz, Peak, 4x8

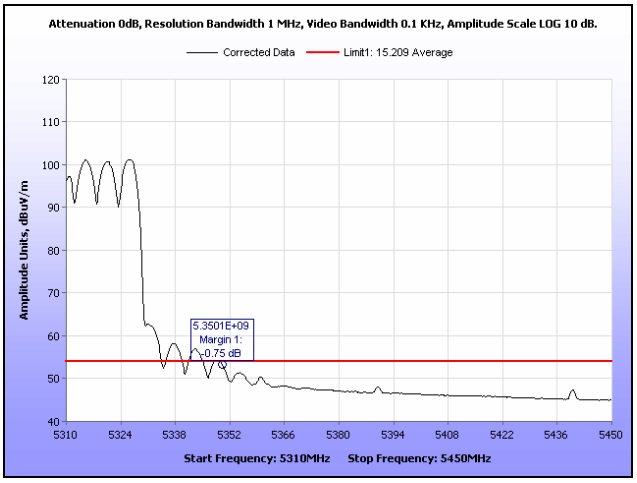
Restricted Band Edge, 802.11n 40 MHz



Plot 1218. Restricted Band Edge, 802.11n 40 MHz, 5270 MHz, Average, 4x8



Plot 1219. Restricted Band Edge, 802.11n 40 MHz, 5270 MHz, Peak, 4x8



Plot 1220. Restricted Band Edge, 802.11n 40 MHz, 5310 MHz, Average, 4x8

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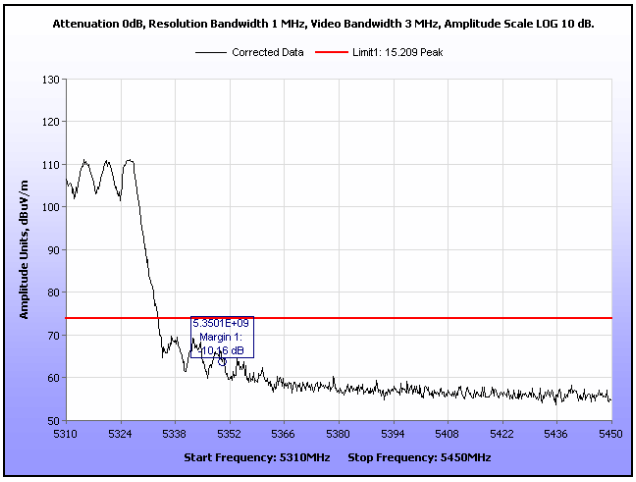
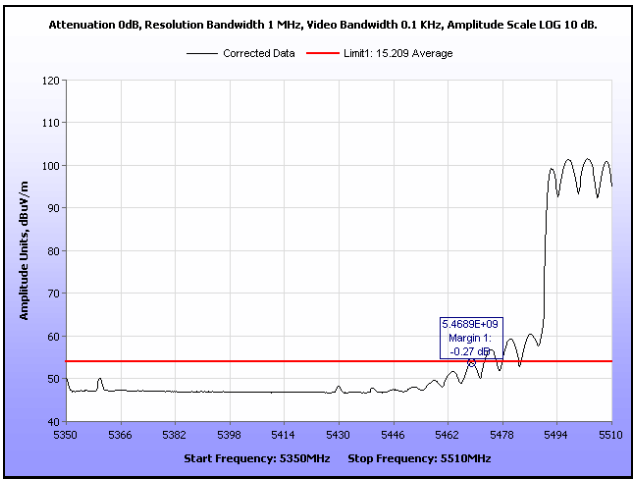
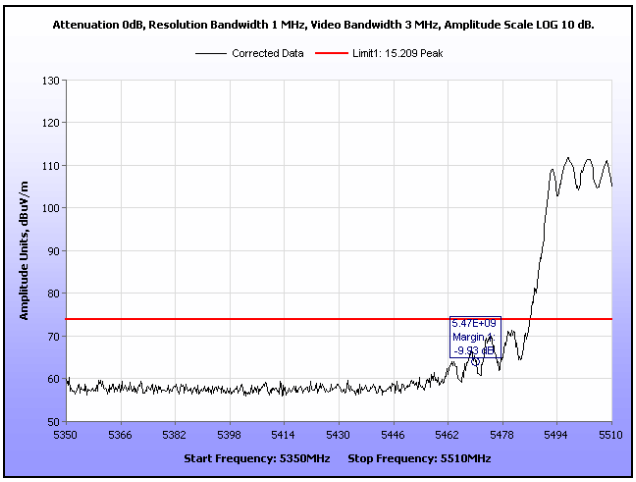


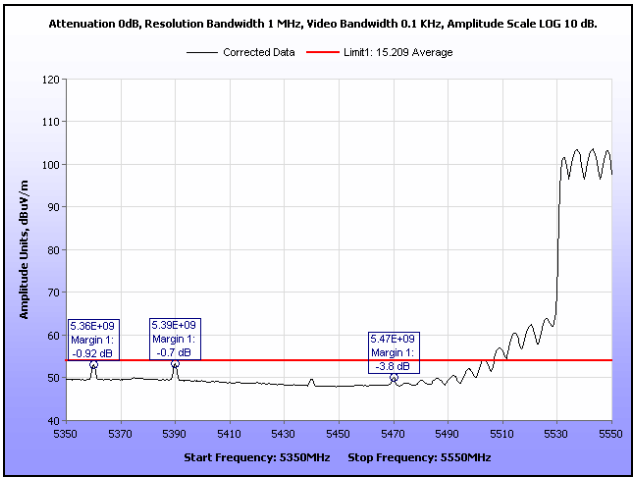
Plot 1221. Restricted Band Edge, 802.11n 40 MHz, 5310 MHz, Peak, 4x8



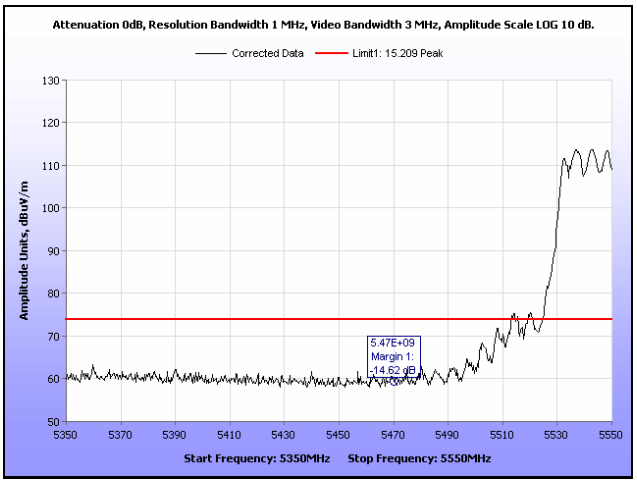
Plot 1222. Restricted Band Edge, 802.11n 40 MHz, 5510 MHz, Average, 4x8



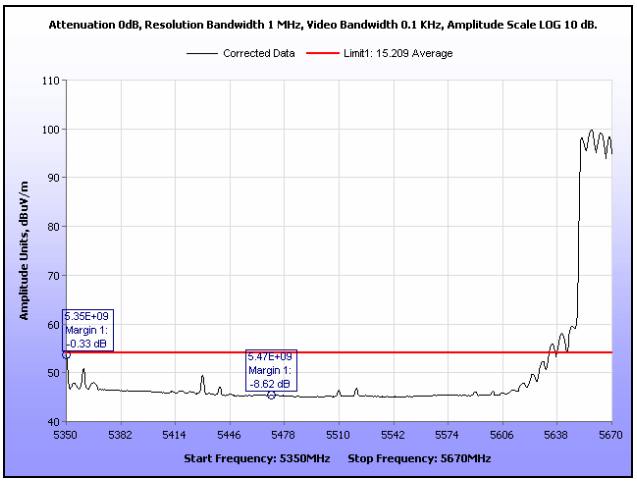
Plot 1223. Restricted Band Edge, 802.11n 40 MHz, 5510 MHz, Peak, 4x8



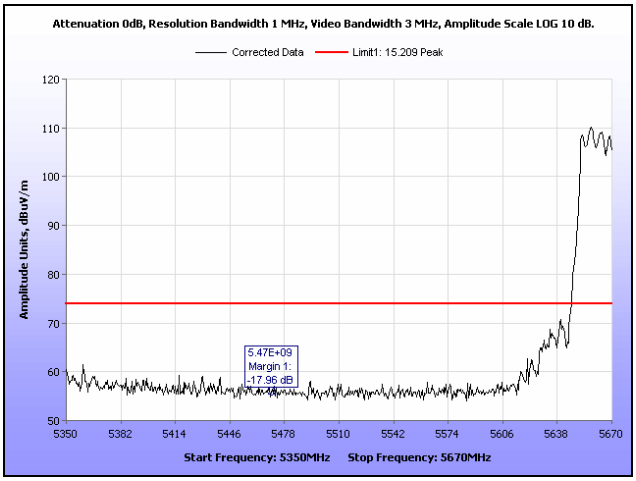
Plot 1224. Restricted Band Edge, 802.11n 40 MHz, 5550 MHz, Average, 4x8



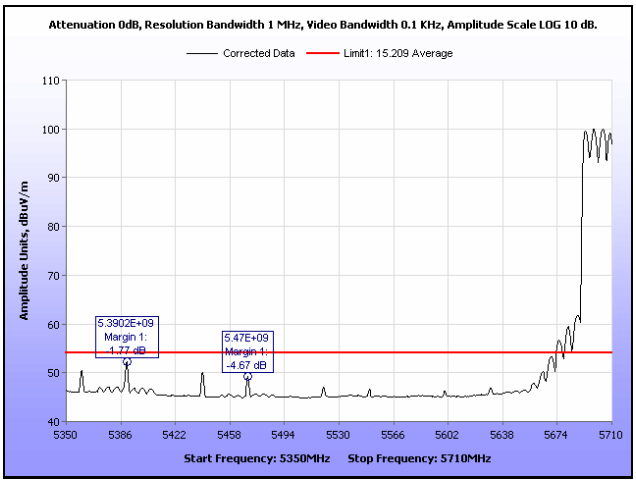
Plot 1225. Restricted Band Edge, 802.11n 40 MHz, 5550 MHz, Peak, 4x8



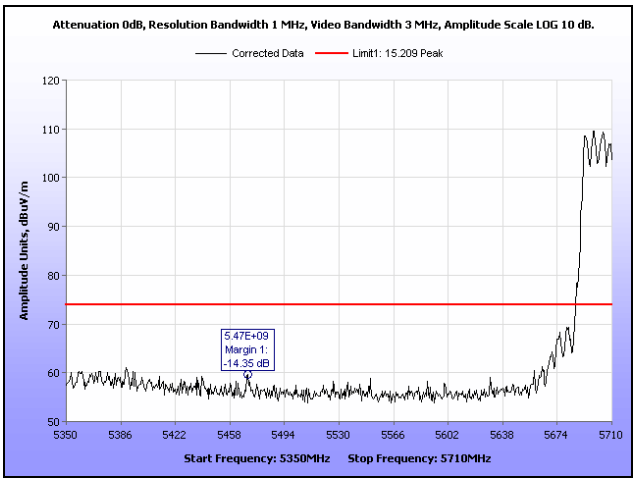
Plot 1226. Restricted Band Edge, 802.11n 40 MHz, 5670 MHz, Average, 4x8



Plot 1227. Restricted Band Edge, 802.11n 40 MHz, 5670 MHz, Peak, 4x8

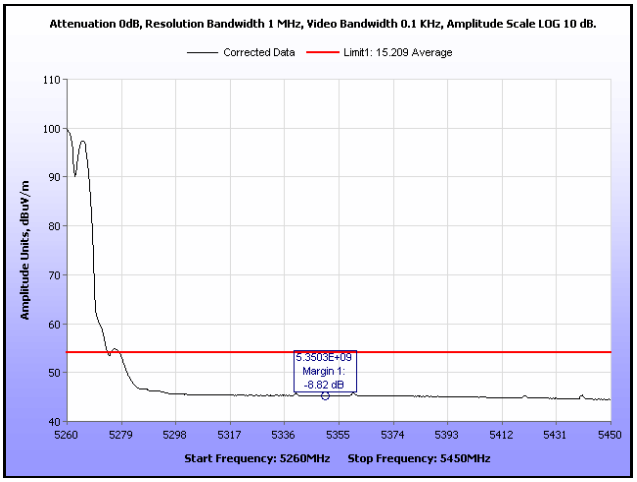


Plot 1228. Restricted Band Edge, 802.11n 40 MHz, 5710 MHz, Average, 4x8

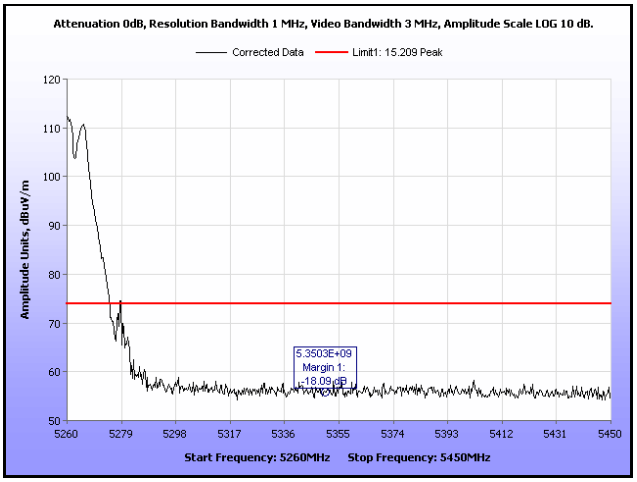


Plot 1229. Restricted Band Edge, 802.11n 40 MHz, 5710 MHz, Peak, 4x8

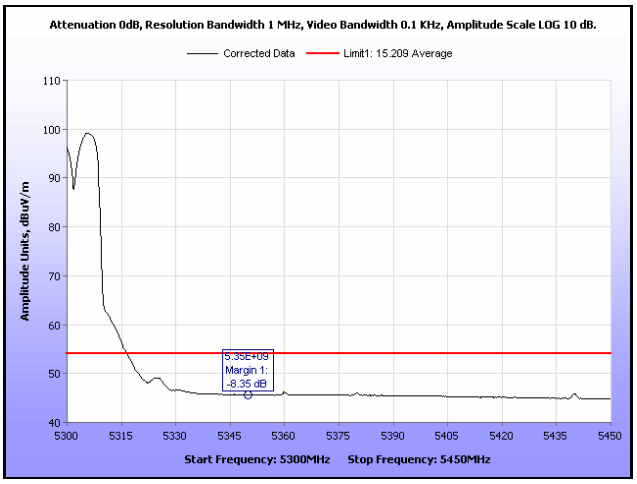
Restricted Band Edge, 802.11a



Plot 1230. Restricted Band Edge, 802.11a, 5260 MHz, Average, 8x8



Plot 1231. Restricted Band Edge, 802.11a, 5260 MHz, Peak, 8x8



Plot 1232. Restricted Band Edge, 802.11a, 5300 MHz, Average, 8x8

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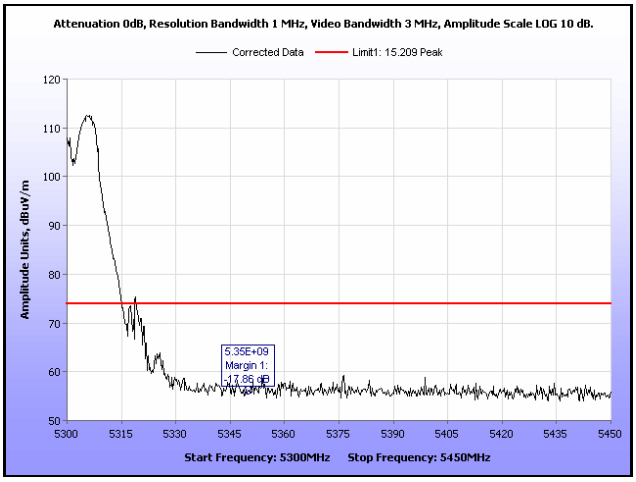
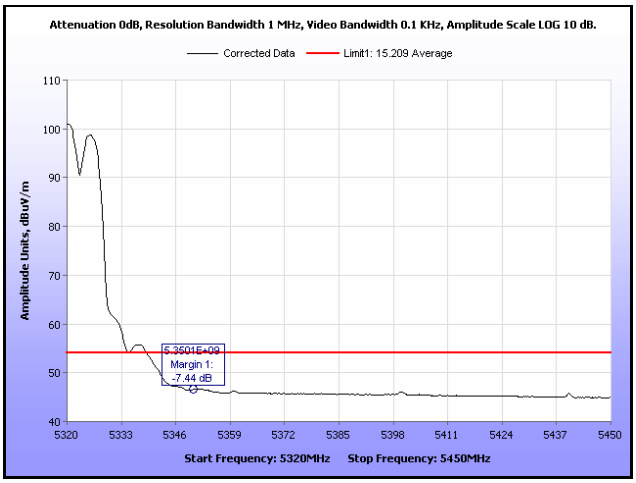
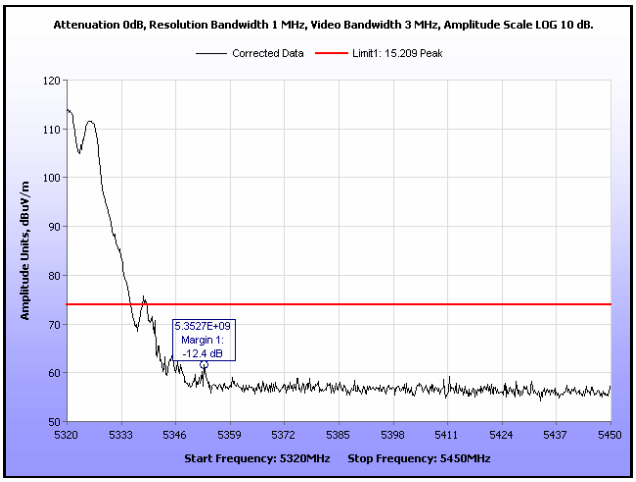


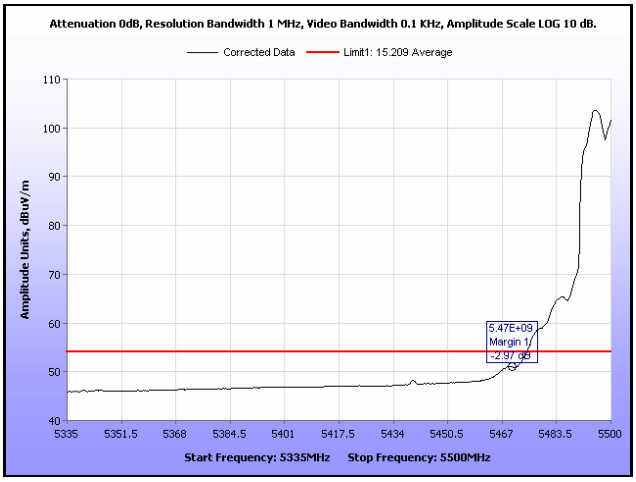
Plot 1233. Restricted Band Edge, 802.11a, 5300 MHz, Peak, 8x8



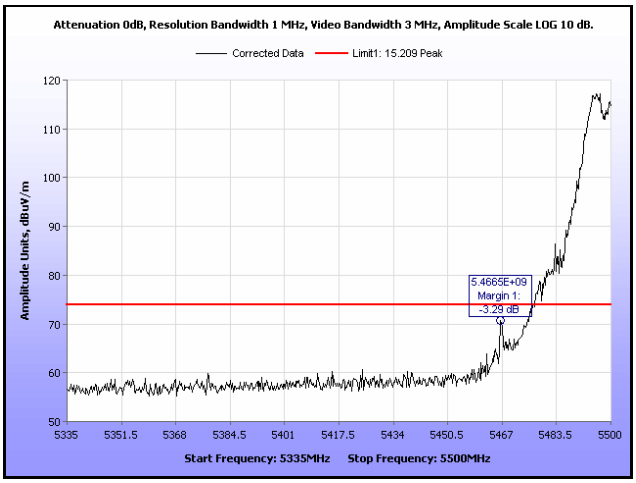
Plot 1234. Restricted Band Edge, 802.11a, 5320 MHz, Average, 8x8



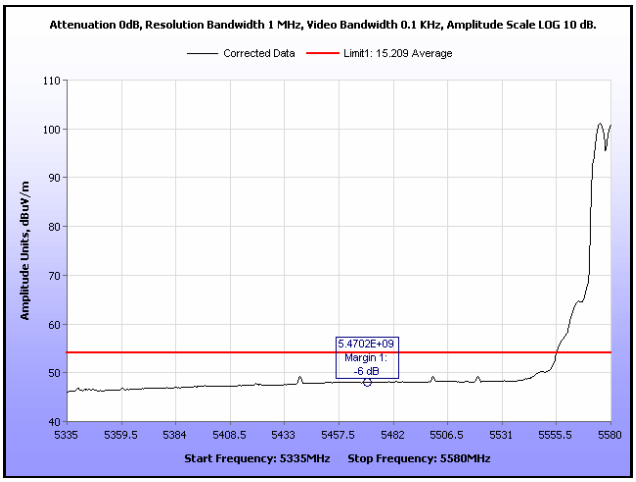
Plot 1235. Restricted Band Edge, 802.11a, 5320 MHz, Peak, 8x8



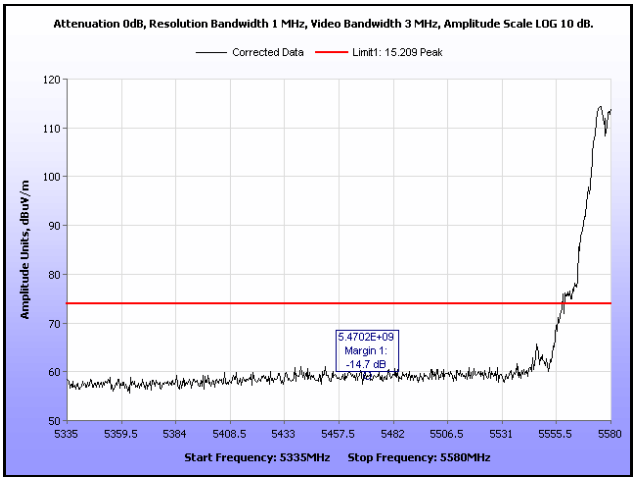
Plot 1236. Restricted Band Edge, 802.11a, 5500 MHz, Average, 8x8



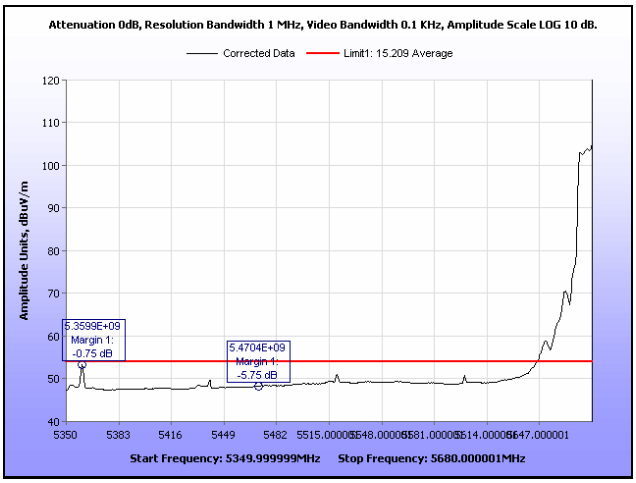
Plot 1237. Restricted Band Edge, 802.11a, 5500 MHz, Peak, 8x8



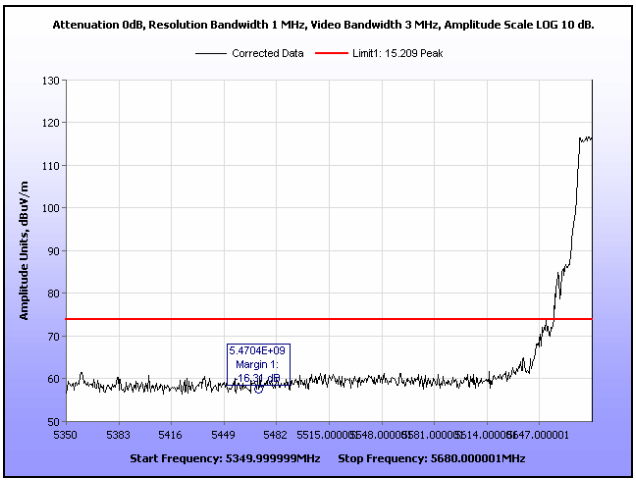
Plot 1238. Restricted Band Edge, 802.11a, 5580 MHz, Average, 8x8



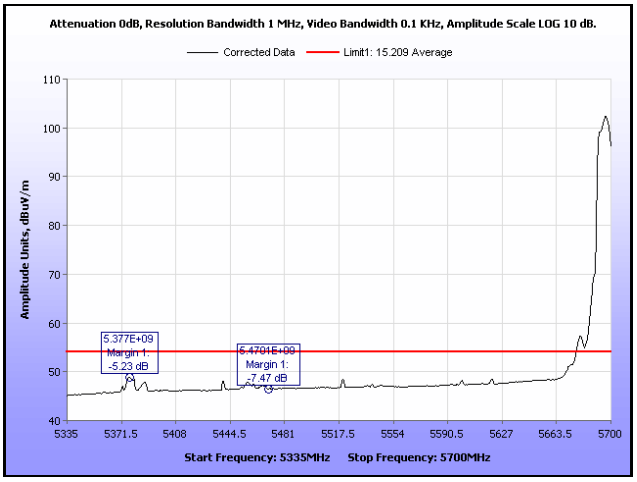
Plot 1239. Restricted Band Edge, 802.11a, 5580 MHz, Peak, 8x8



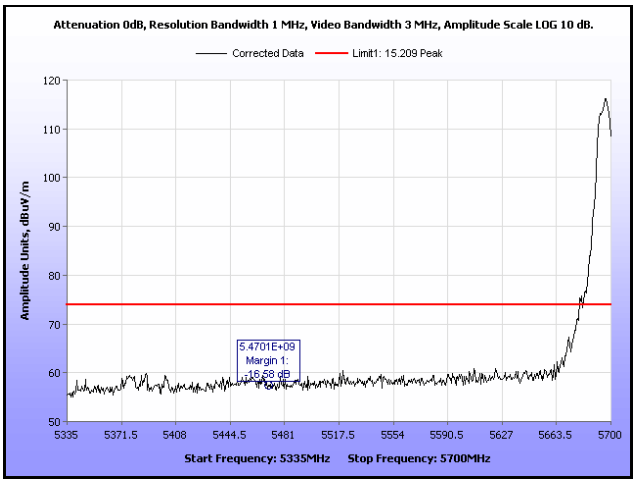
Plot 1240. Restricted Band Edge, 802.11a, 5680 MHz, Average, 8x8



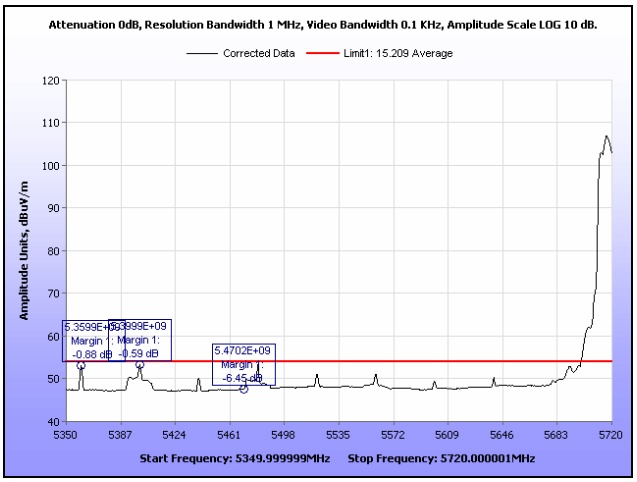
Plot 1241. Restricted Band Edge, 802.11a, 5680 MHz, Peak, 8x8



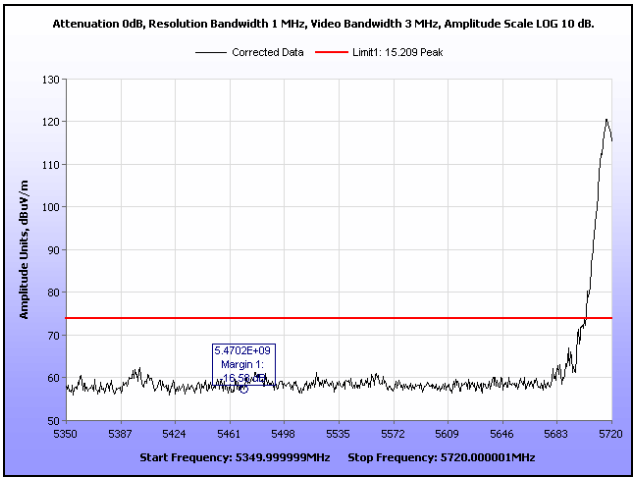
Plot 1242. Restricted Band Edge, 802.11a, 5700 MHz, Average, 8x8



Plot 1243. Restricted Band Edge, 802.11a, 5700 MHz, Peak, 8x8

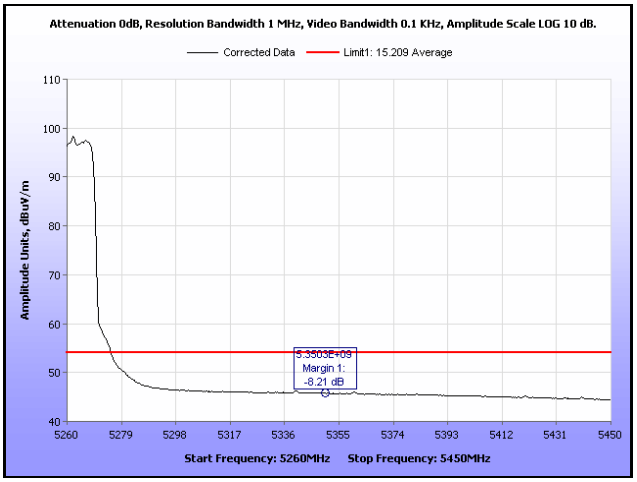


Plot 1244. Restricted Band Edge, 802.11a, 5720 MHz, Average, 8x8

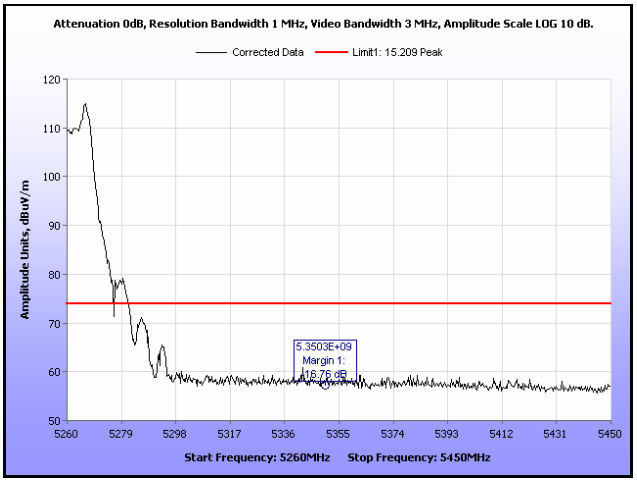


Plot 1245. Restricted Band Edge, 802.11a, 5720 MHz, Peak, 8x8

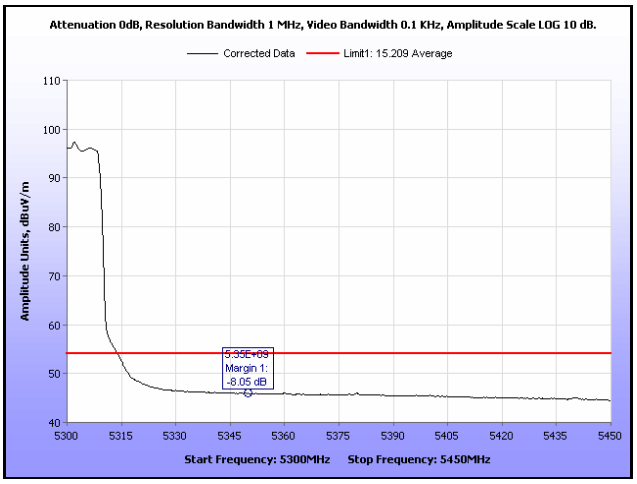
Restricted Band Edge, 802.11ac 20 MHz



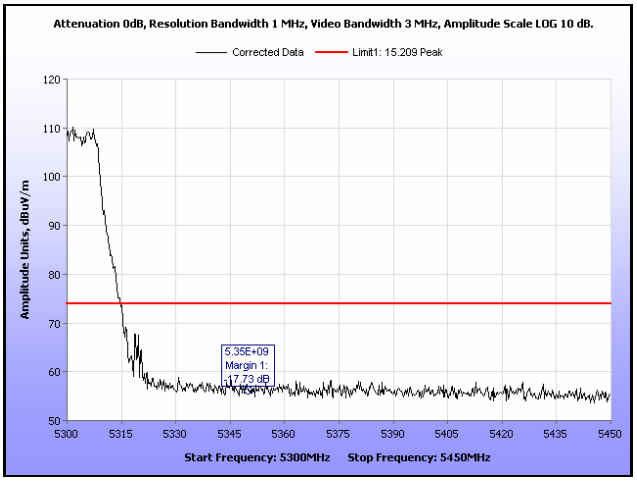
Plot 1246. Restricted Band Edge, 802.11ac 20 MHz, 5260 MHz, Average, 8x8



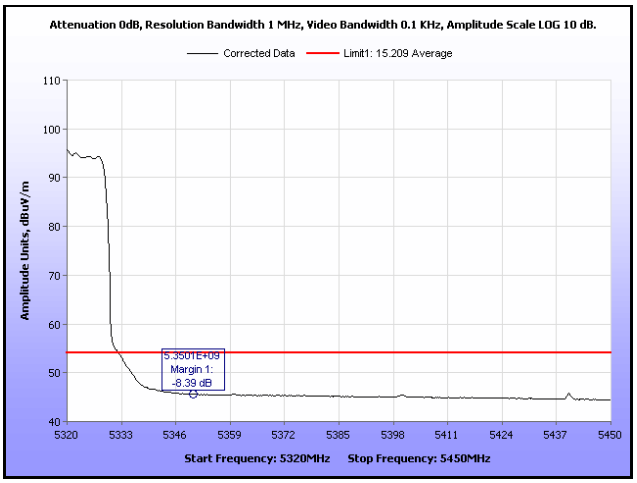
Plot 1247. Restricted Band Edge, 802.11ac 20 MHz, 5260 MHz, Peak, 8x8



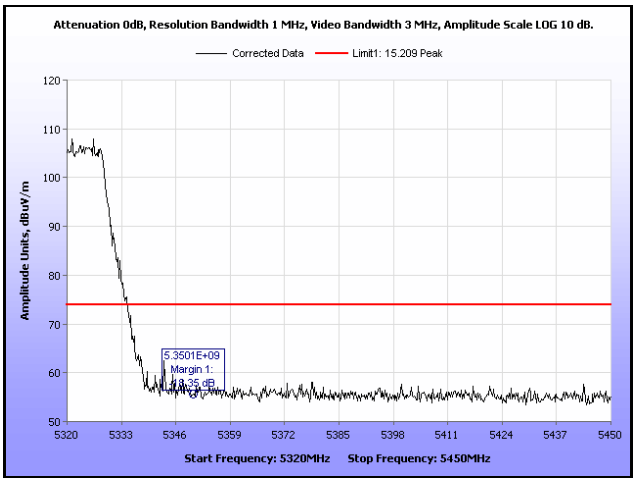
Plot 1248. Restricted Band Edge, 802.11ac 20 MHz, 5300 MHz, Average, 8x8



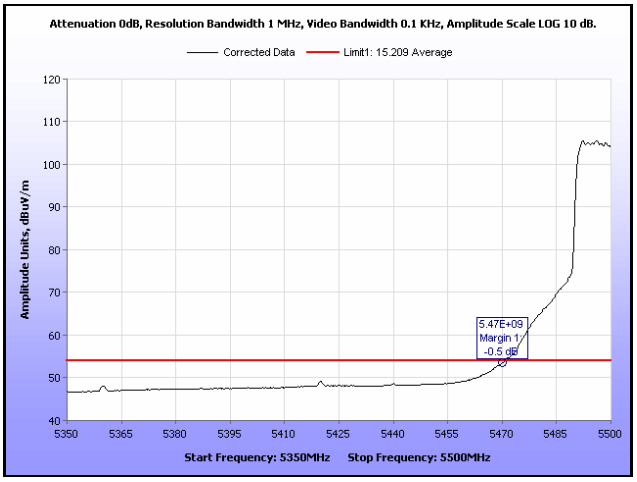
Plot 1249. Restricted Band Edge, 802.11ac 20 MHz, 5300 MHz, Peak, 8x8



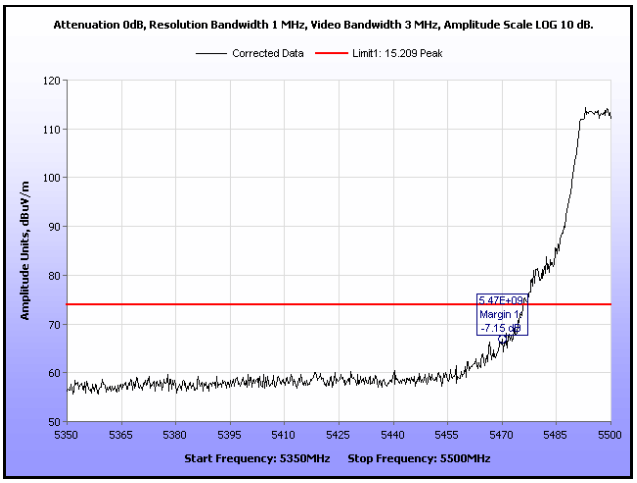
Plot 1250. Restricted Band Edge, 802.11ac 20 MHz, 5320 MHz, Average, 8x8



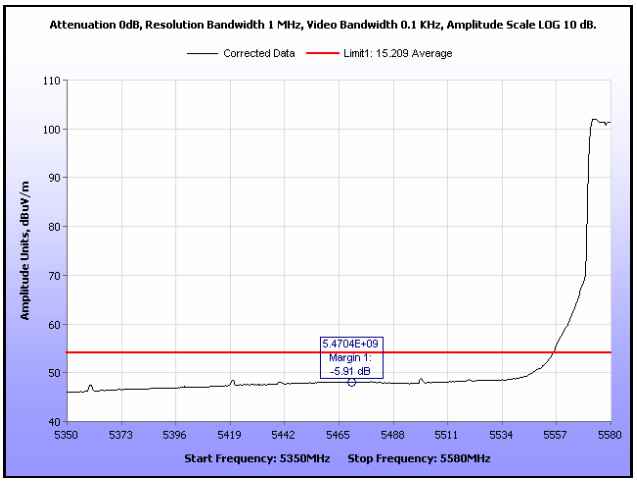
Plot 1251. Restricted Band Edge, 802.11ac 20 MHz, 5320 MHz, Peak, 8x8



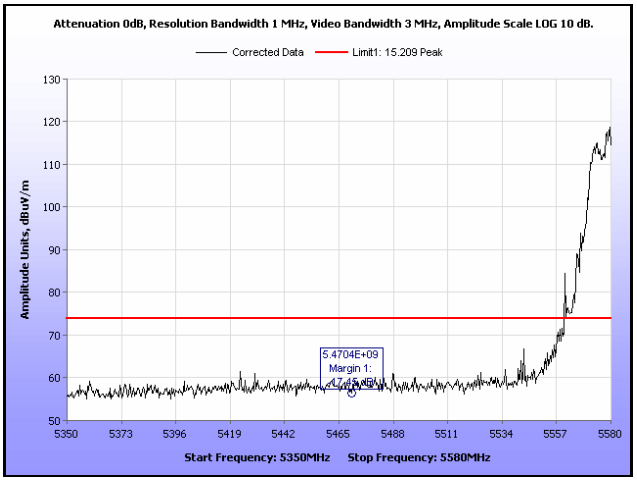
Plot 1252. Restricted Band Edge, 802.11ac 20 MHz, 5500 MHz, Average, 8x8



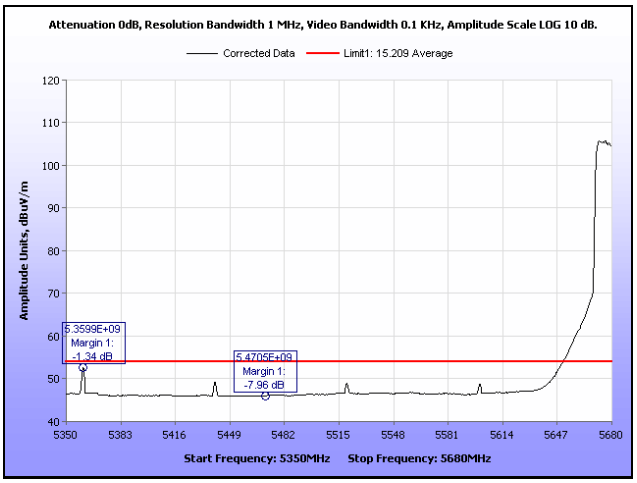
Plot 1253. Restricted Band Edge, 802.11ac 20 MHz, 5500 MHz, Peak, 8x8



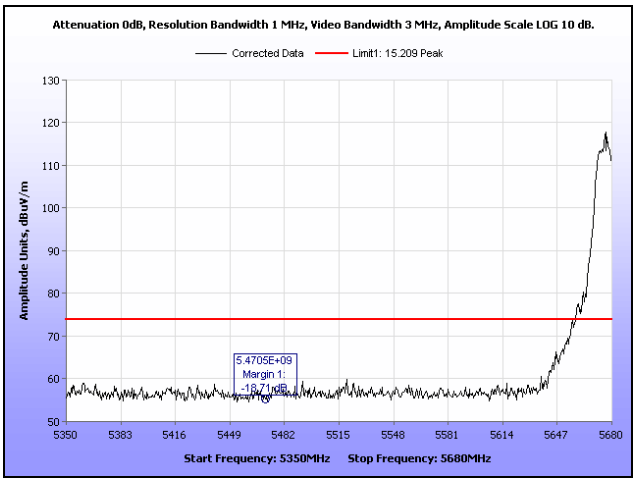
Plot 1254. Restricted Band Edge, 802.11ac 20 MHz, 5580 MHz, Average, 8x8



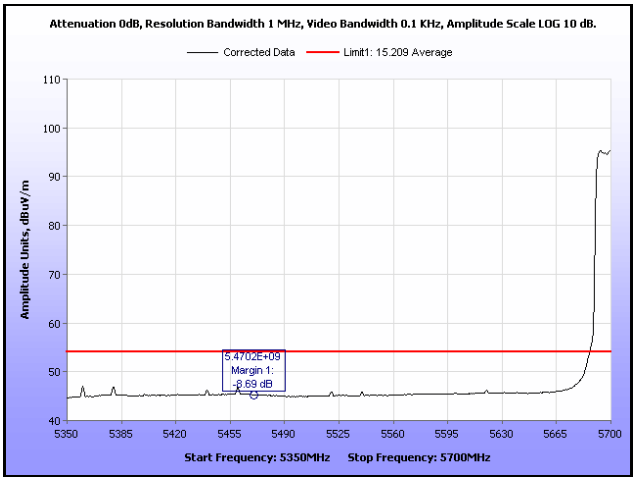
Plot 1255. Restricted Band Edge, 802.11ac 20 MHz, 5580 MHz, Peak, 8x8



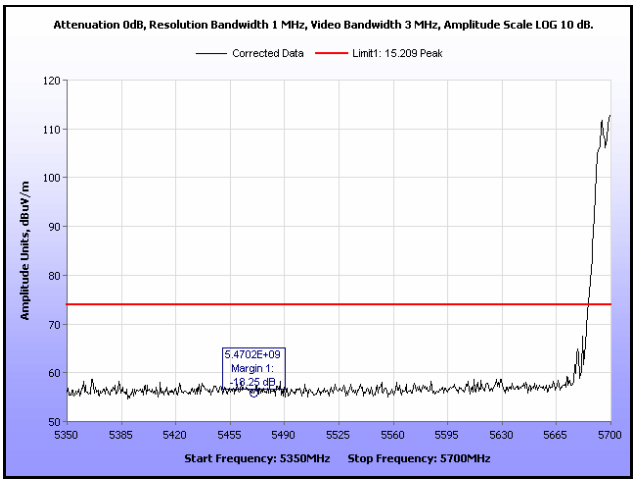
Plot 1256. Restricted Band Edge, 802.11ac 20 MHz, 5680 MHz, Peak, 8x8



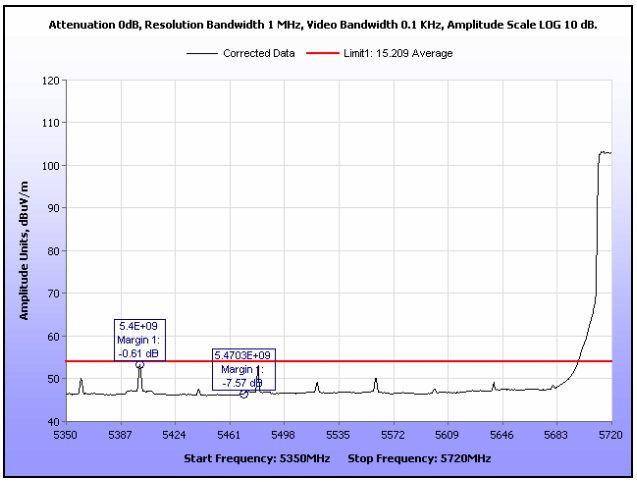
Plot 1257. Restricted Band Edge, 802.11ac 20 MHz, 5680 MHz, Average, 8x8



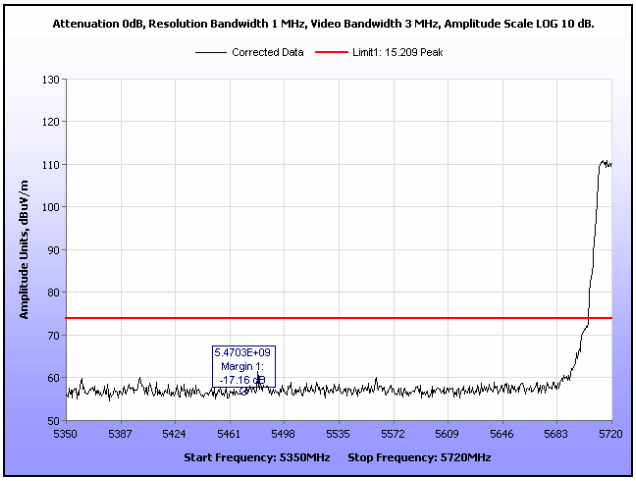
Plot 1258. Restricted Band Edge, 802.11ac 20 MHz, 5700 MHz, Average, 8x8



Plot 1259. Restricted Band Edge, 802.11ac 20 MHz, 5700 MHz, Peak, 8x8



Plot 1260. Restricted Band Edge, 802.11ac 20 MHz, 5720 MHz, Average, 8x8



Plot 1261. Restricted Band Edge, 802.11ac 20 MHz, 5720 MHz, Peak, 8x8

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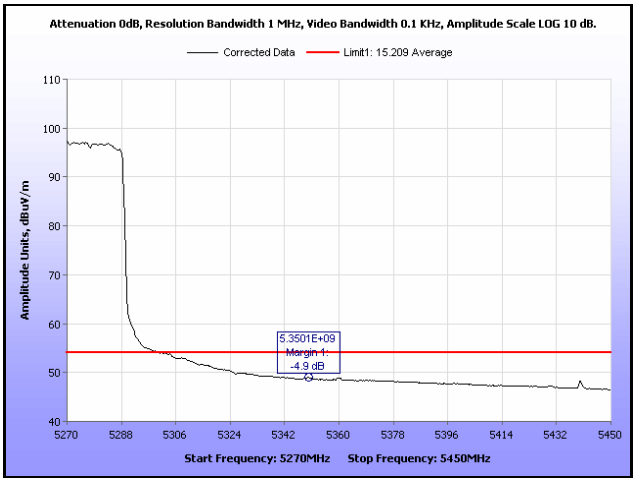
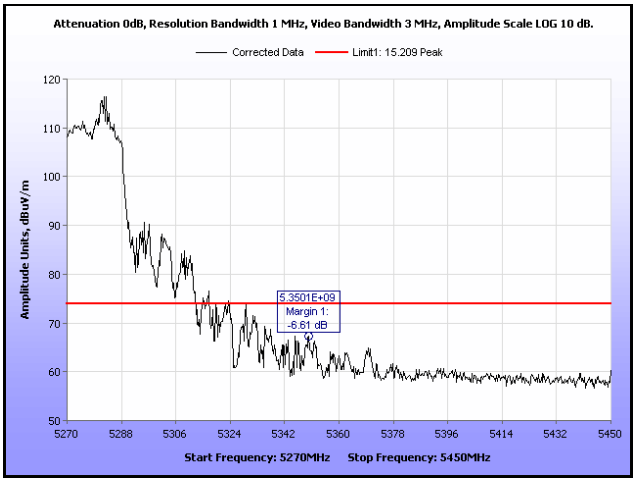
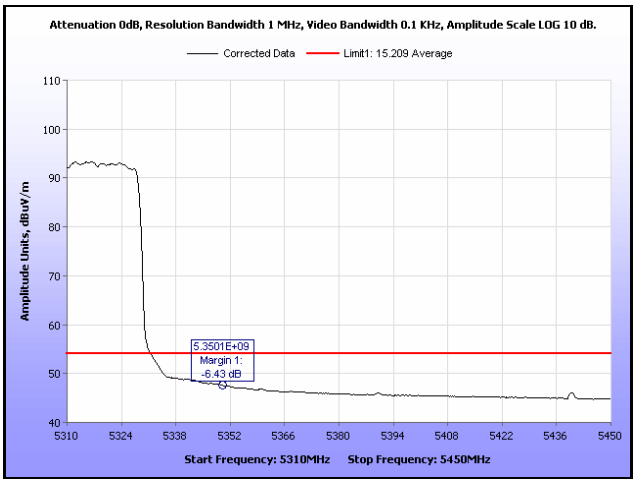
Restricted Band Edge, 802.11ac 40 MHz



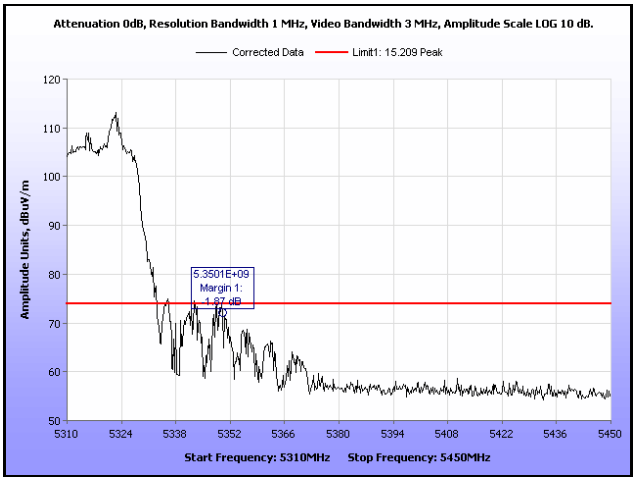
Plot 1262. Restricted Band Edge, 802.11ac 40 MHz, 5270 MHz, Average, 8x8



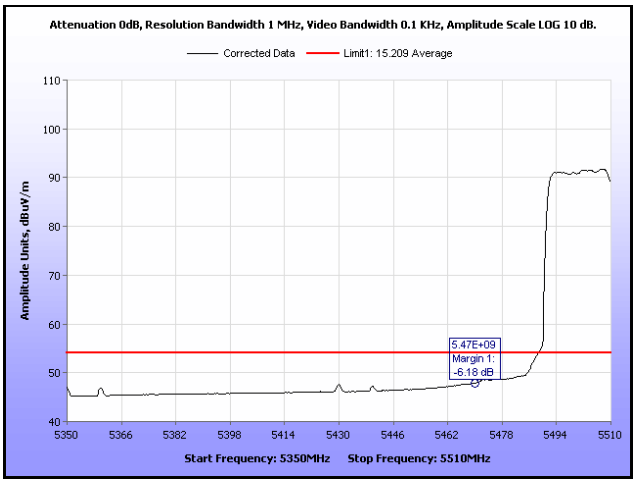
Plot 1263. Restricted Band Edge, 802.11ac 40 MHz, 5270 MHz, Peak, 8x8



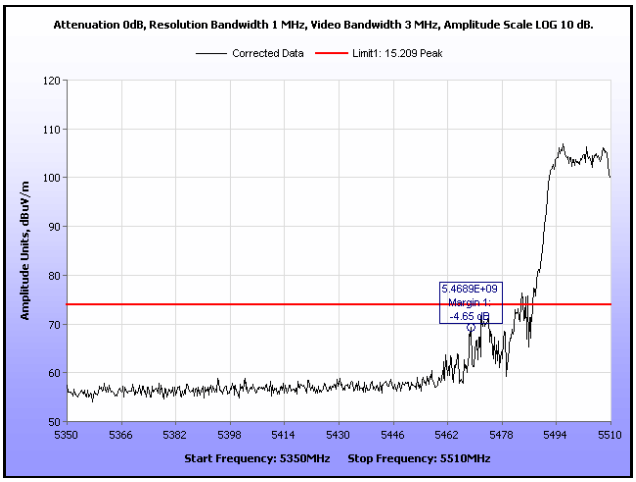
Plot 1264. Restricted Band Edge, 802.11ac 40 MHz, 5310 MHz, Average, 8x8



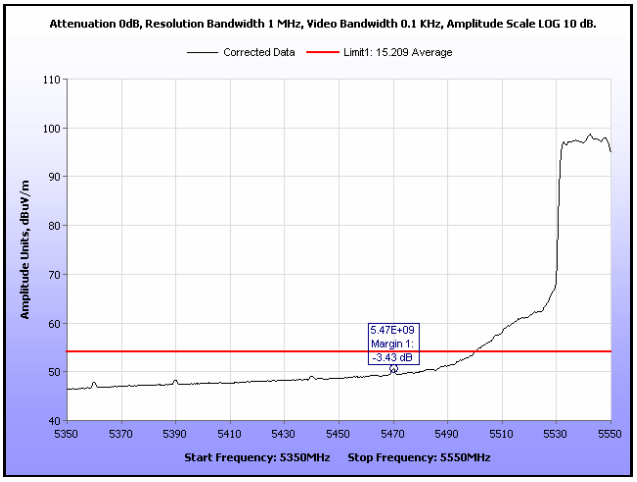
Plot 1265. Restricted Band Edge, 802.11ac 40 MHz, 5310 MHz, Peak, 8x8



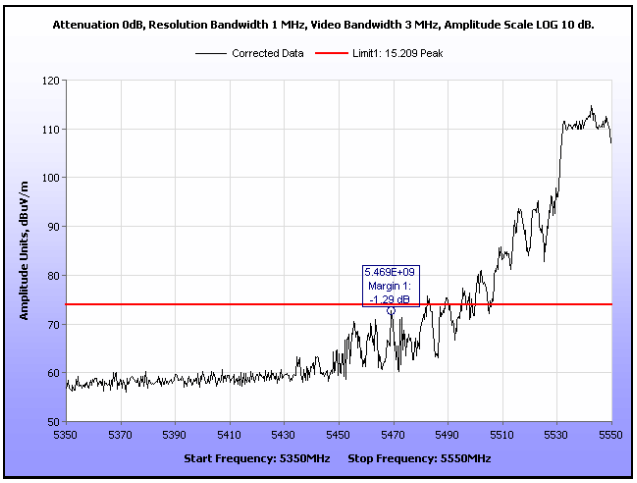
Plot 1266. Restricted Band Edge, 802.11ac 40 MHz, 5510 MHz, Average, 8x8



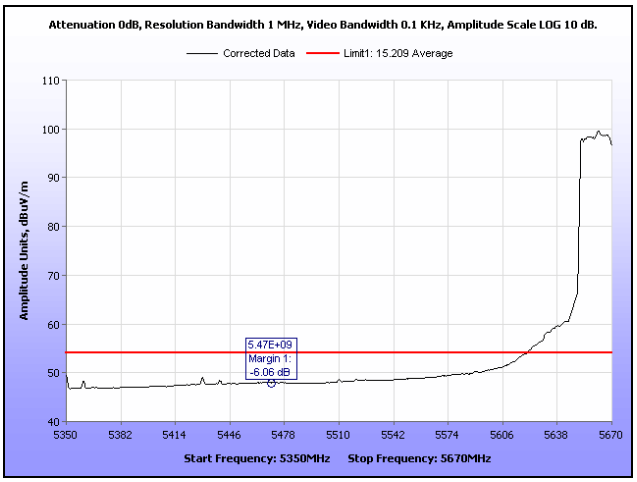
Plot 1267. Restricted Band Edge, 802.11ac 40 MHz, 5510 MHz, Peak, 8x8



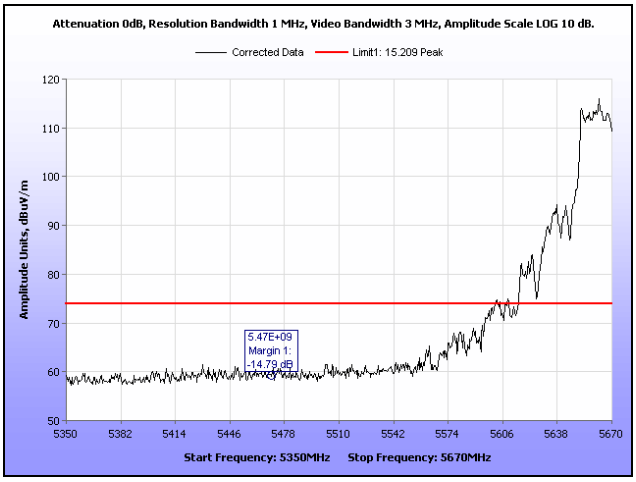
Plot 1268. Restricted Band Edge, 802.11ac 40 MHz, 5550 MHz, Average, 8x8



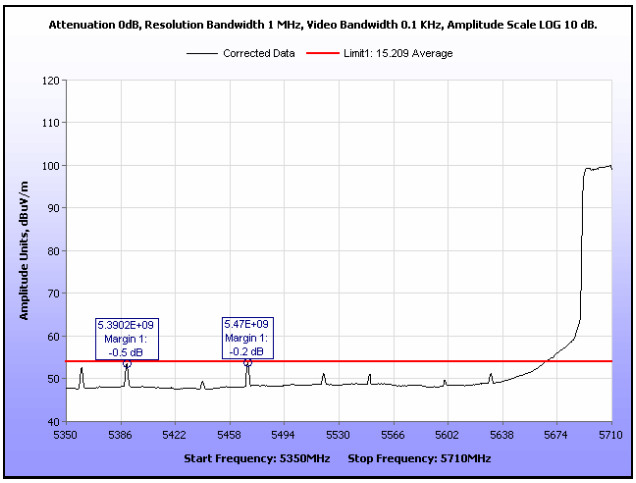
Plot 1269. Restricted Band Edge, 802.11ac 40 MHz, 5550 MHz, Peak, 8x8



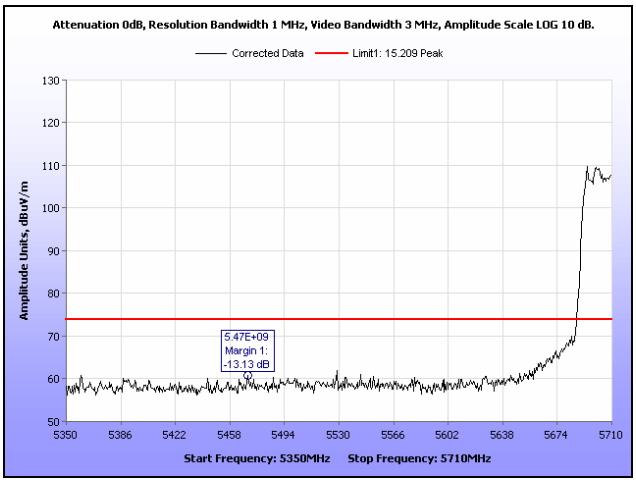
Plot 1270. Restricted Band Edge, 802.11ac 40 MHz, 5670 MHz, Average, 8x8



Plot 1271. Restricted Band Edge, 802.11ac 40 MHz, 5670 MHz, Peak, 8x8

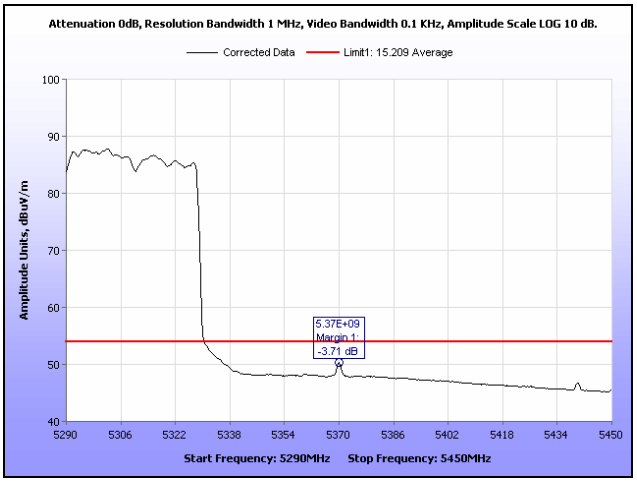


Plot 1272. Restricted Band Edge, 802.11ac 40 MHz, 5710 MHz, Average, 8x8

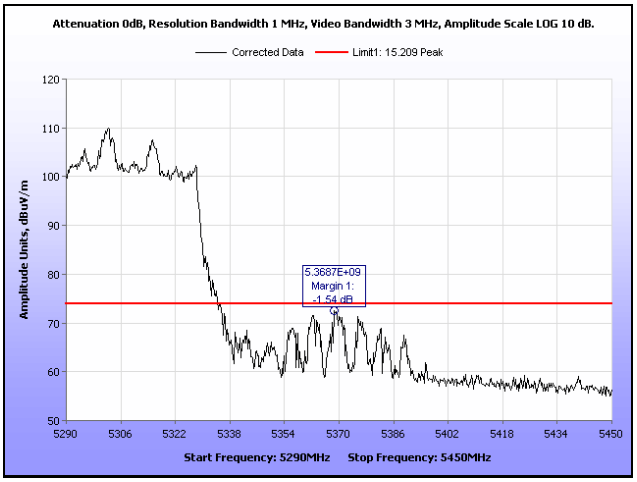


Plot 1273. Restricted Band Edge, 802.11ac 40 MHz, 5710 MHz, Peak, 8x8

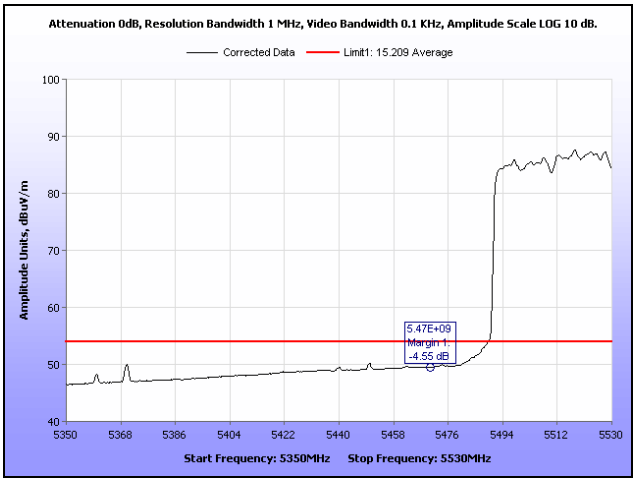
Restricted Band Edge, 802.11ac 80 MHz



Plot 1274. Restricted Band Edge, 802.11ac 80 MHz, 5290 MHz, Average, 8x8



Plot 1275. Restricted Band Edge, 802.11ac 80 MHz, 5290 MHz, Peak, 8x8



Plot 1276. Restricted Band Edge, 802.11ac 80 MHz, 5530 MHz, Average, 8x8

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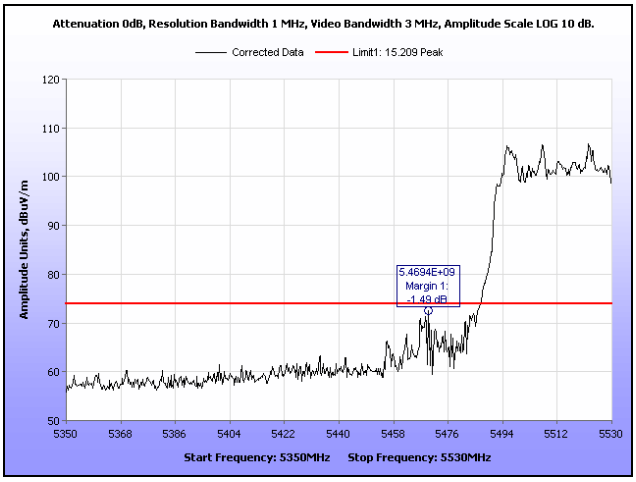
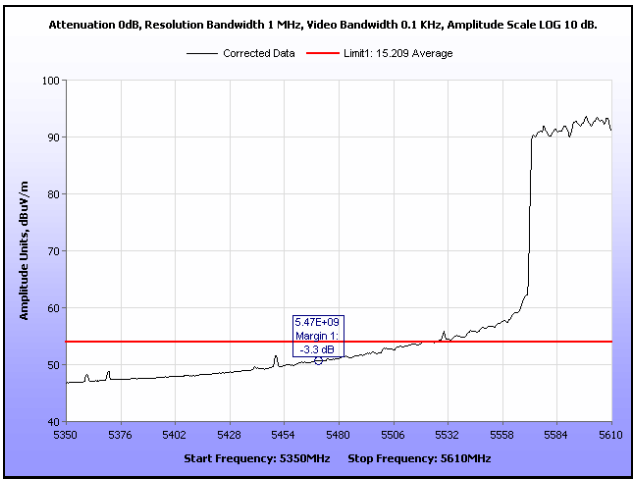
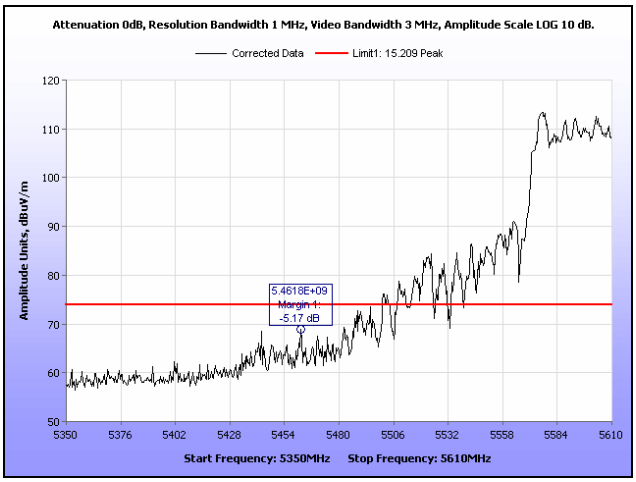


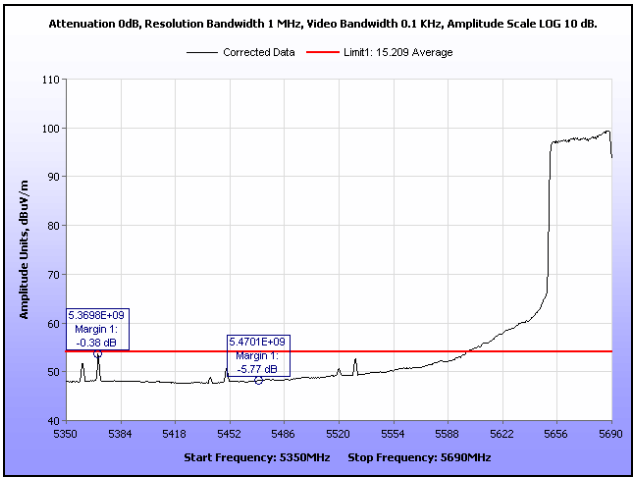
Plot 1277. Restricted Band Edge, 802.11ac 80 MHz, 5530 MHz, Peak, 8x8



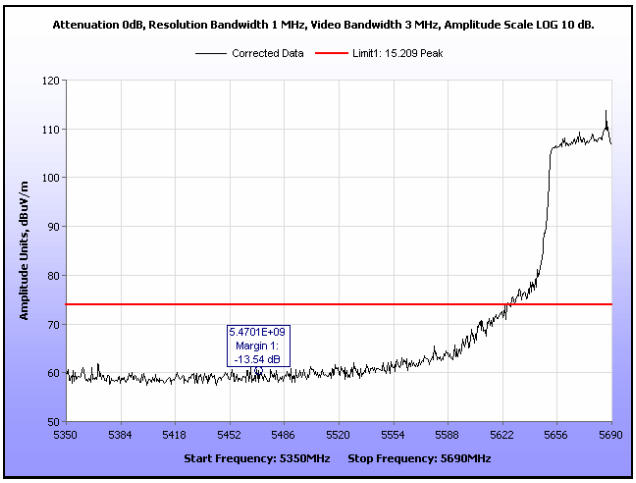
Plot 1278. Restricted Band Edge, 802.11ac 80 MHz, 5610 MHz, Average, 8x8



Plot 1279. Restricted Band Edge, 802.11ac 80 MHz, 5610 MHz, Peak, 8x8



Plot 1280. Restricted Band Edge, 802.11ac 80 MHz, 5690 MHz, Average, 8x8



Plot 1281. Restricted Band Edge, 802.11ac 80 MHz, 5690 MHz, Peak, 8x8

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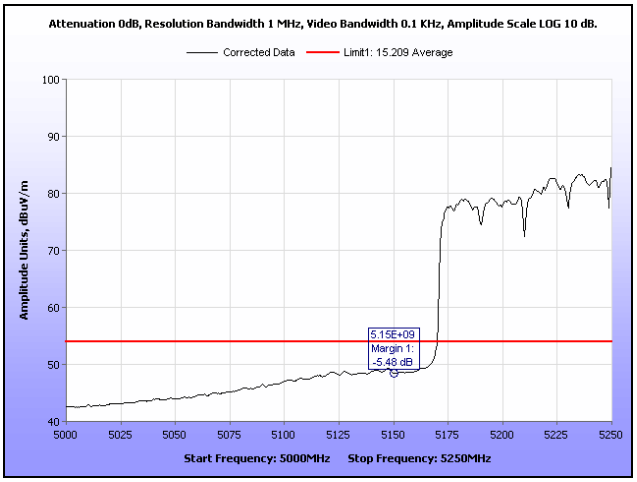
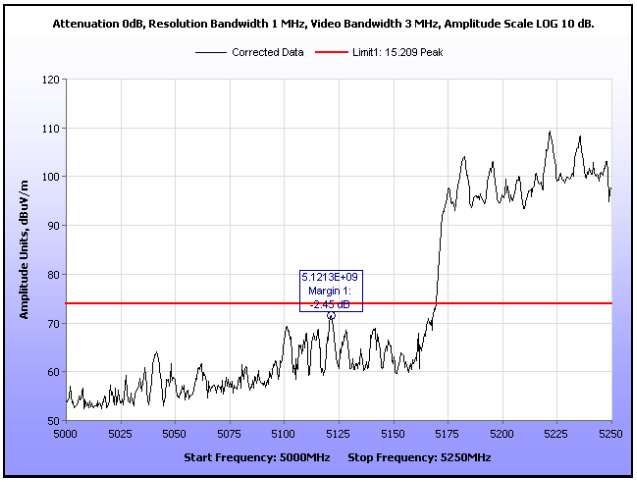
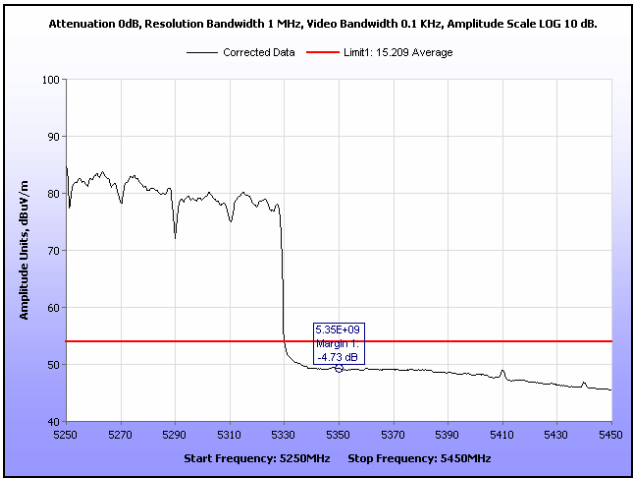
Restricted Band Edge, 802.11ac 160 MHz



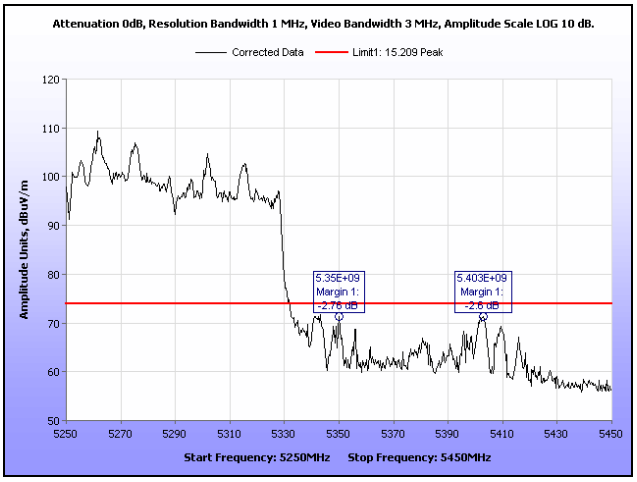
Plot 1282. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Average, 8x8, Left



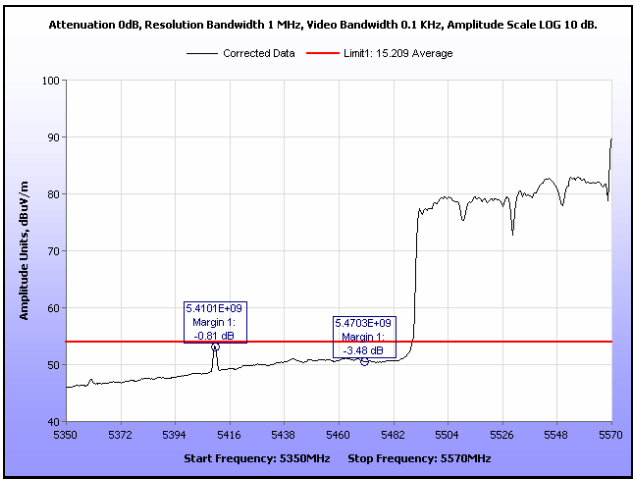
Plot 1283. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Peak, 8x8, Left



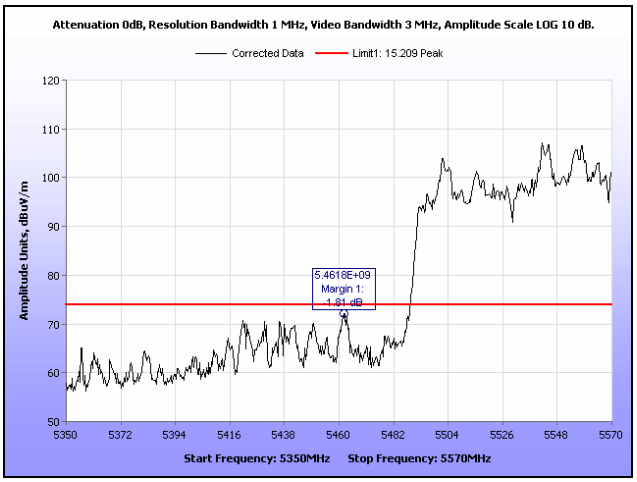
Plot 1284. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Average, 8x8, Right



Plot 1285. Restricted Band Edge, 802.11ac 160 MHz, 5250 MHz, Peak, 8x8, Right

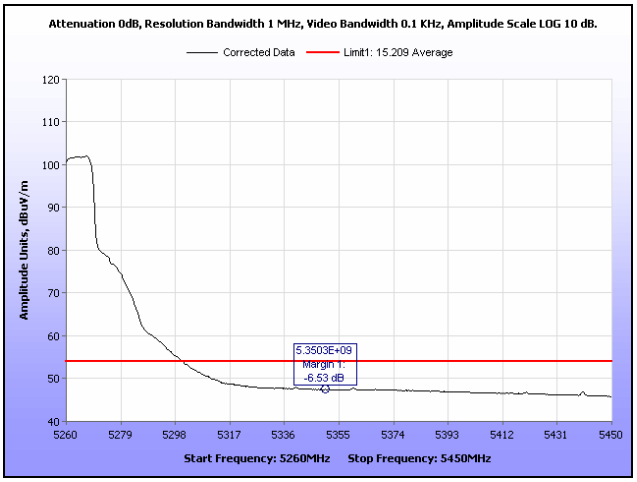


Plot 1286. Restricted Band Edge, 802.11ac 160 MHz, 5570 MHz, Average, 8x8

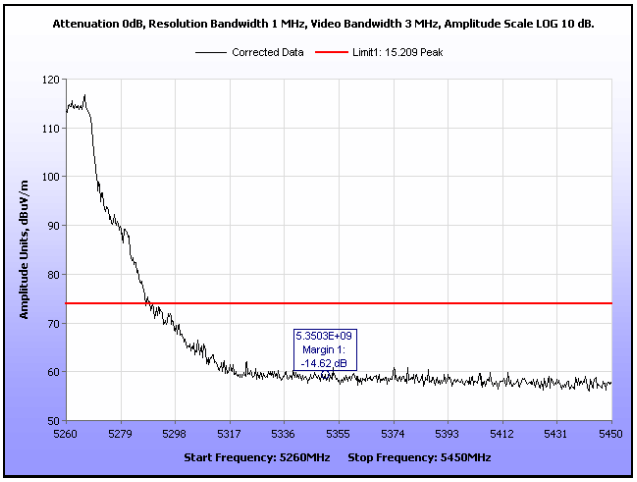


Plot 1287. Restricted Band Edge, 802.11ac 160 MHz, 5570 MHz, Peak, 8x8

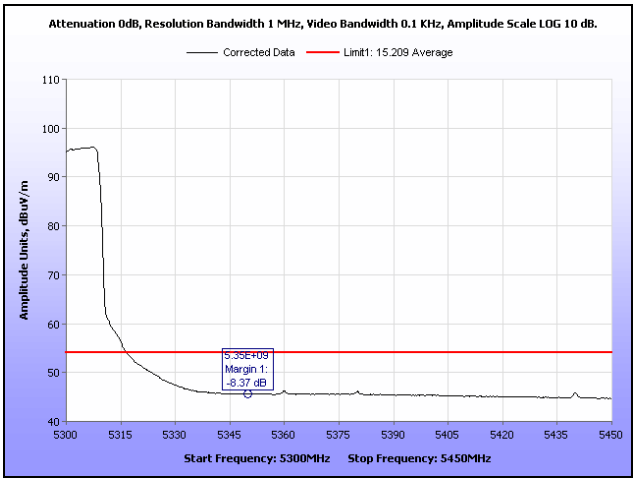
Restricted Band Edge, 802.11n 20 MHz



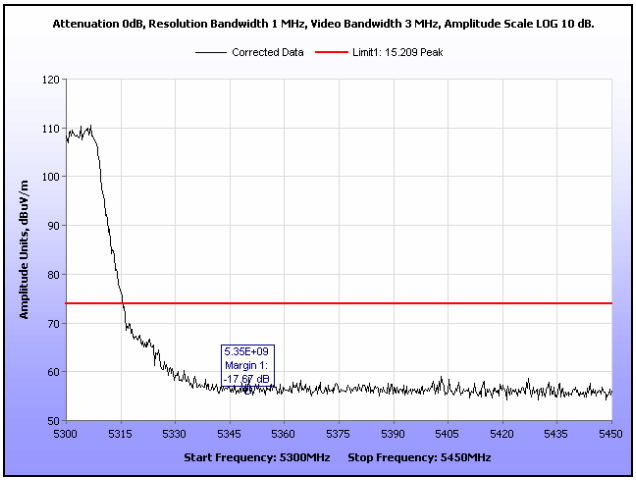
Plot 1288. Restricted Band Edge, 802.11n 20 MHz, 5260 MHz, Average, 8x8



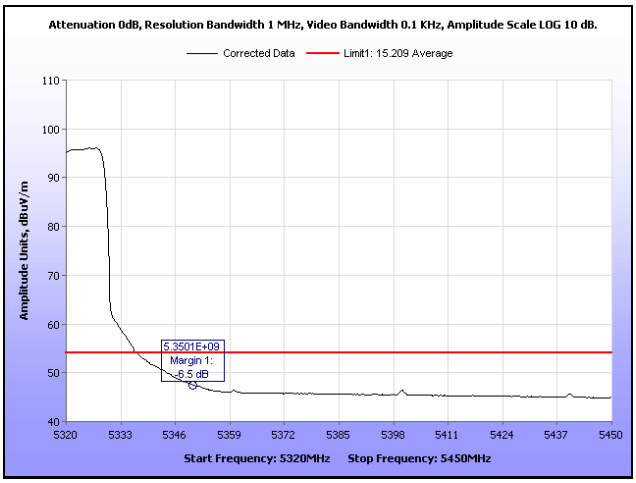
Plot 1289. Restricted Band Edge, 802.11n 20 MHz, 5260 MHz, Peak, 8x8



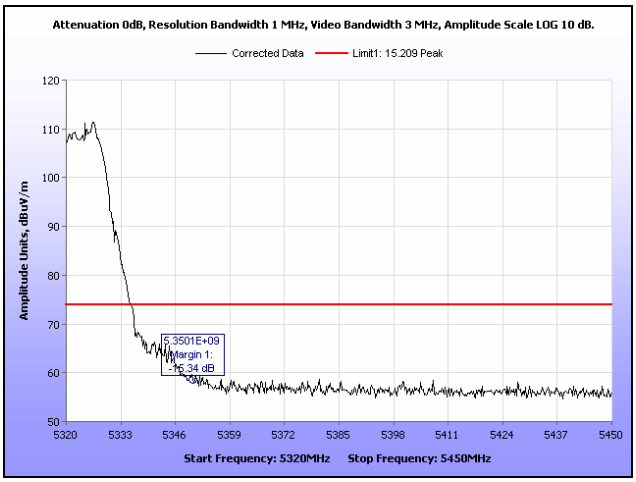
Plot 1290. Restricted Band Edge, 802.11n 20 MHz, 5300 MHz, Average, 8x8



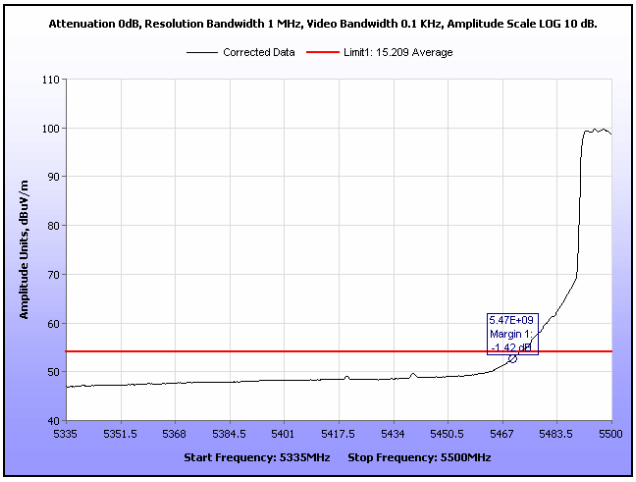
Plot 1291. Restricted Band Edge, 802.11n 20 MHz, 5300 MHz, Peak, 8x8



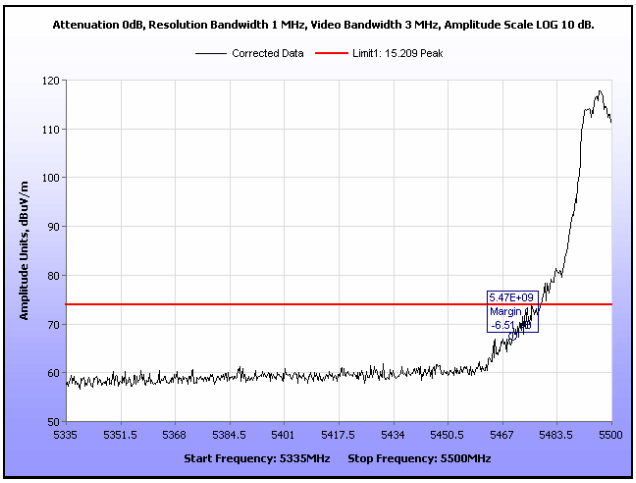
Plot 1292. Restricted Band Edge, 802.11n 20 MHz, 5320 MHz, Average, 8x8



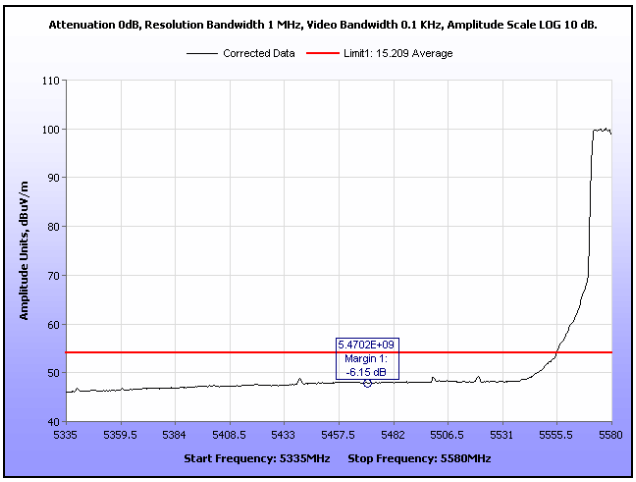
Plot 1293. Restricted Band Edge, 802.11n 20 MHz, 5320 MHz, Peak, 8x8



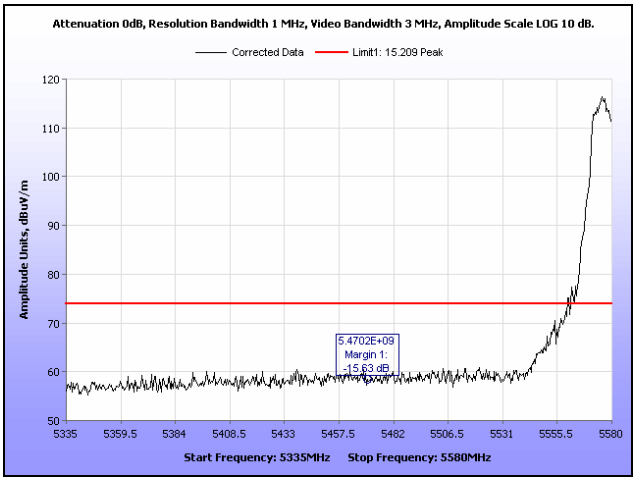
Plot 1294. Restricted Band Edge, 802.11n 20 MHz, 5500 MHz, Average, 8x8



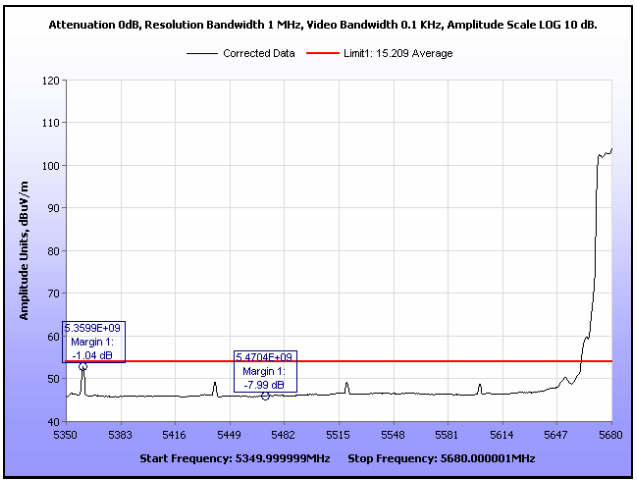
Plot 1295. Restricted Band Edge, 802.11n 20 MHz, 5500 MHz, Peak, 8x8



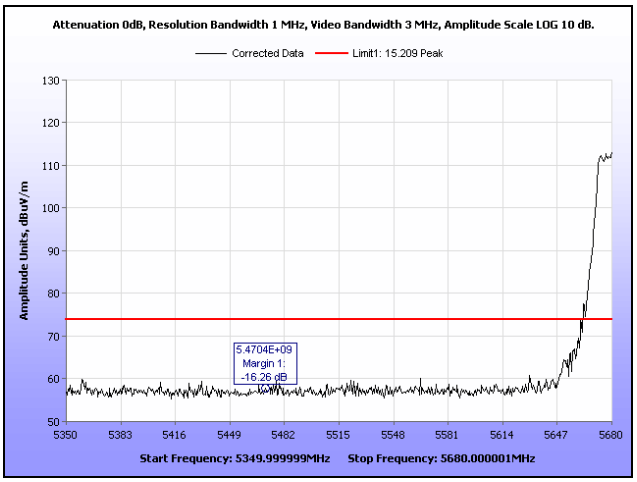
Plot 1296. Restricted Band Edge, 802.11n 20 MHz, 5580 MHz, Average, 8x8



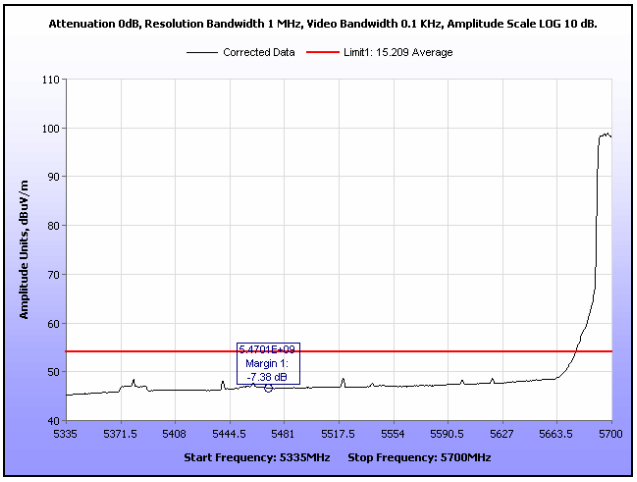
Plot 1297. Restricted Band Edge, 802.11n 20 MHz, 5580 MHz, Peak, 8x8



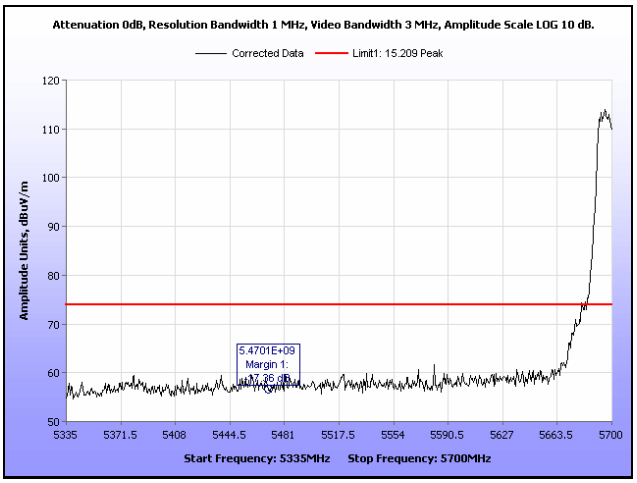
Plot 1298. Restricted Band Edge, 802.11n 20 MHz, 5680 MHz, Average, 8x8



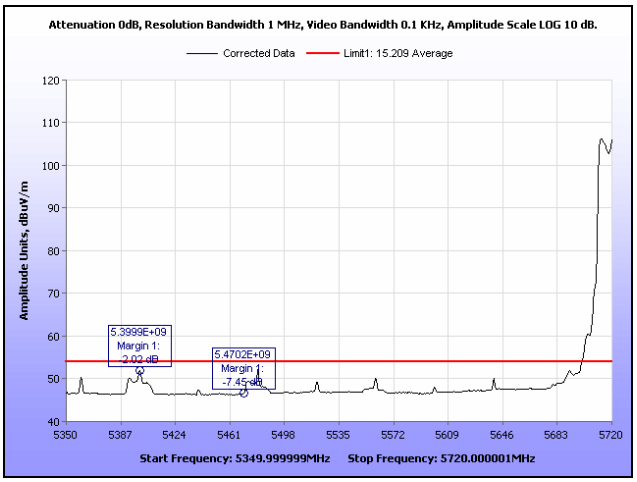
Plot 1299. Restricted Band Edge, 802.11n 20 MHz, 5680 MHz, Peak, 8x8



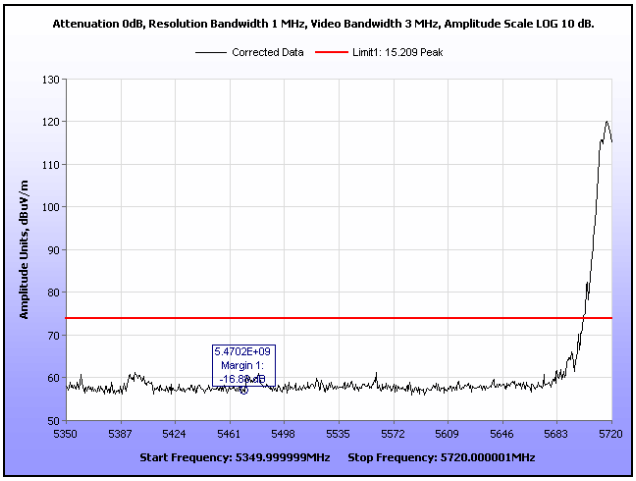
Plot 1300. Restricted Band Edge, 802.11n 20 MHz, 5700 MHz, Average, 8x8



Plot 1301. Restricted Band Edge, 802.11n 20 MHz, 5700 MHz, Peak, 8x8

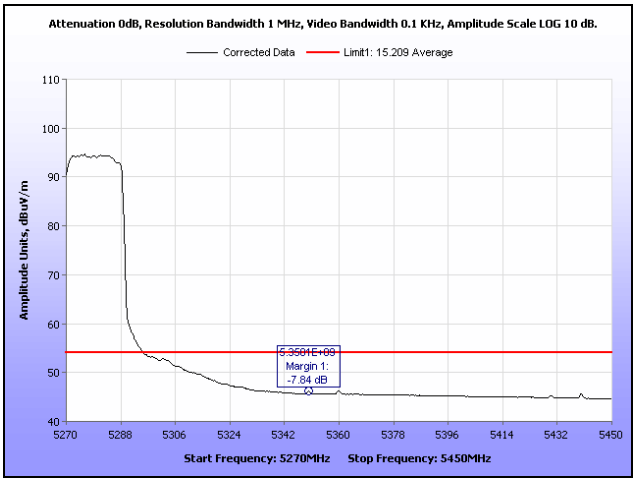


Plot 1302. Restricted Band Edge, 802.11n 20 MHz, 5720 MHz, Average, 8x8

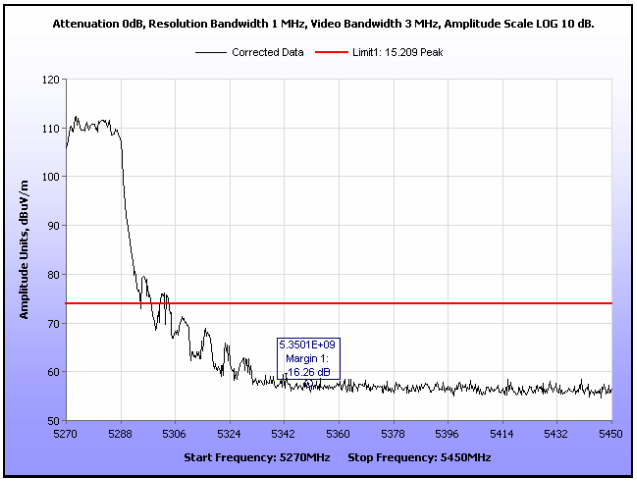


Plot 1303. Restricted Band Edge, 802.11n 20 MHz, 5720 MHz, Peak, 8x8

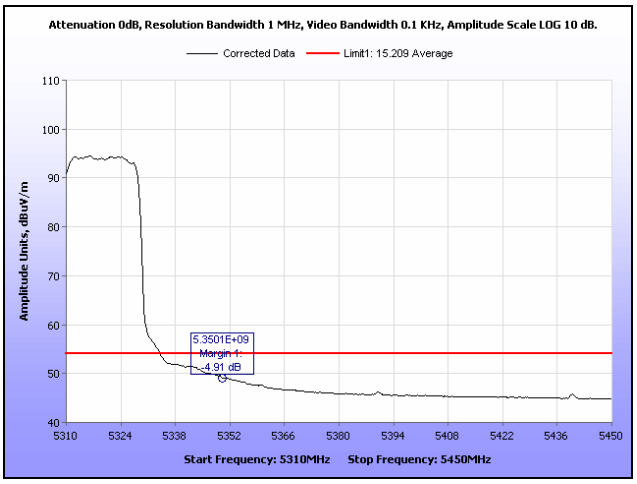
Restricted Band Edge, 802.11n 40 MHz



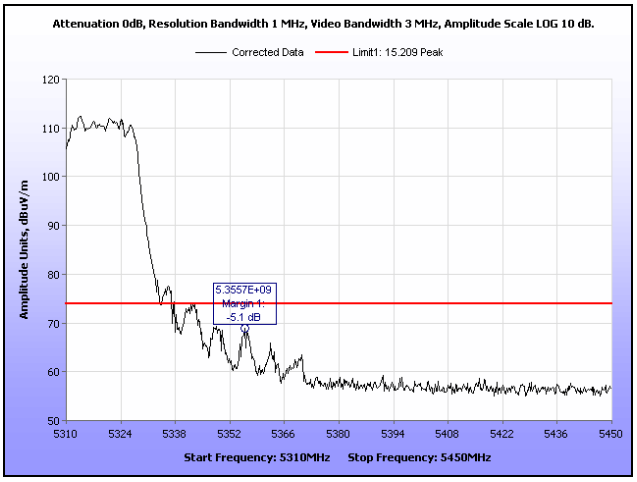
Plot 1304. Restricted Band Edge, 802.11n 40 MHz, 5270 MHz, Average, 8x8



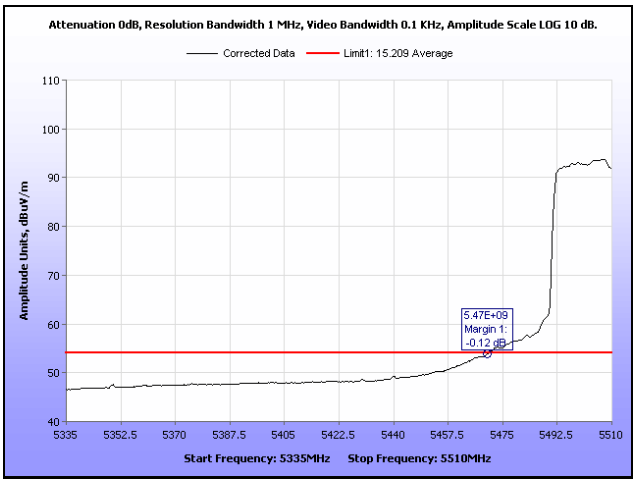
Plot 1305. Restricted Band Edge, 802.11n 40 MHz, 5270 MHz, Peak, 8x8



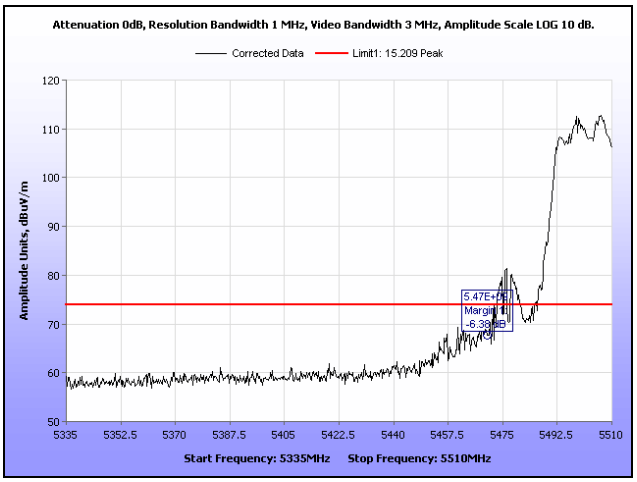
Plot 1306. Restricted Band Edge, 802.11n 40 MHz, 5310 MHz, Average, 8x8



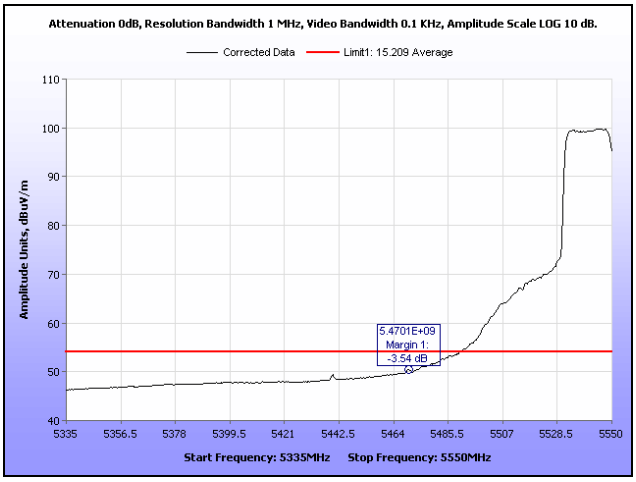
Plot 1307. Restricted Band Edge, 802.11n 40 MHz, 5310 MHz, Peak, 8x8



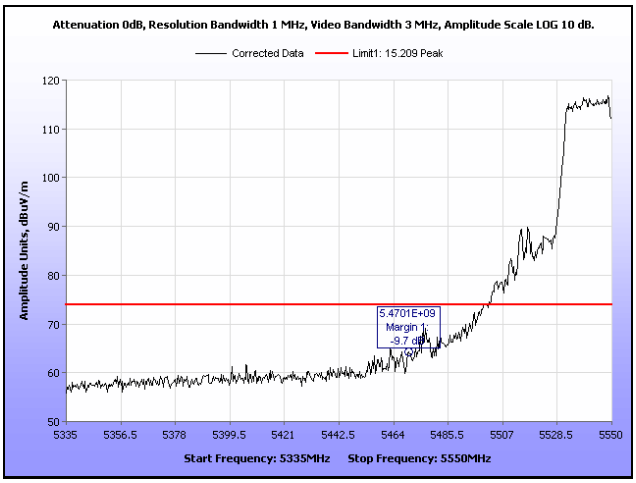
Plot 1308. Restricted Band Edge, 802.11n 40 MHz, 5510 MHz, Average, 8x8



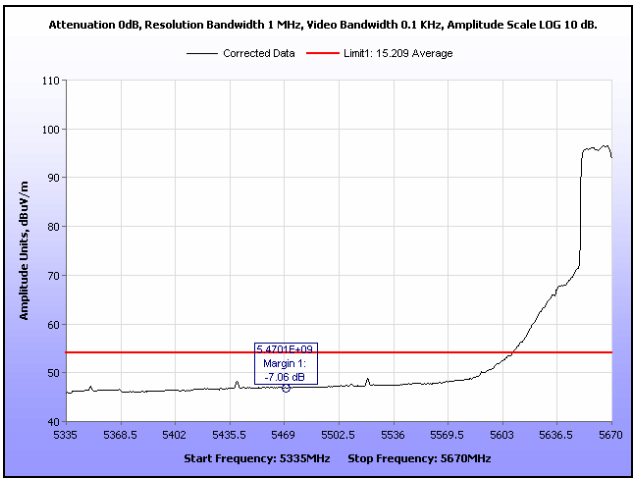
Plot 1309. Restricted Band Edge, 802.11n 40 MHz, 5510 MHz, Peak, 8x8



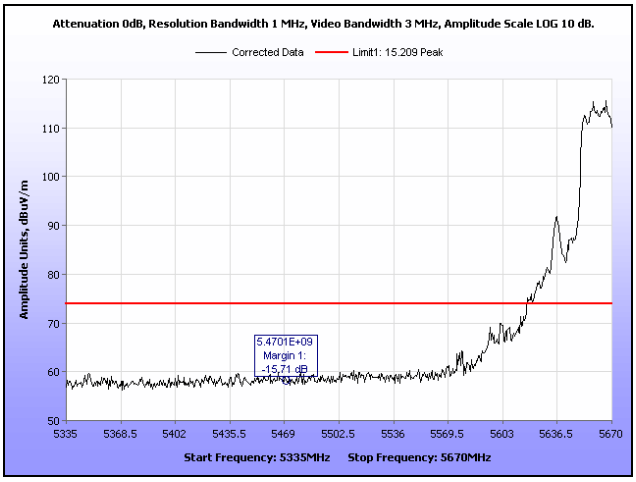
Plot 1310. Restricted Band Edge, 802.11n 40 MHz, 5550 MHz, Average, 8x8



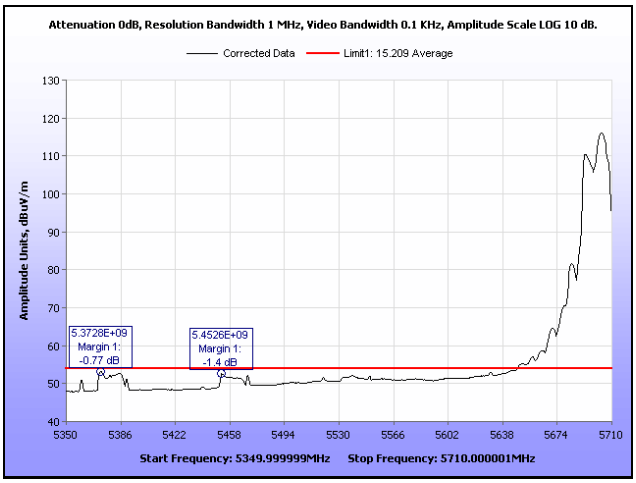
Plot 1311. Restricted Band Edge, 802.11n 40 MHz, 5550 MHz, Peak, 8x8



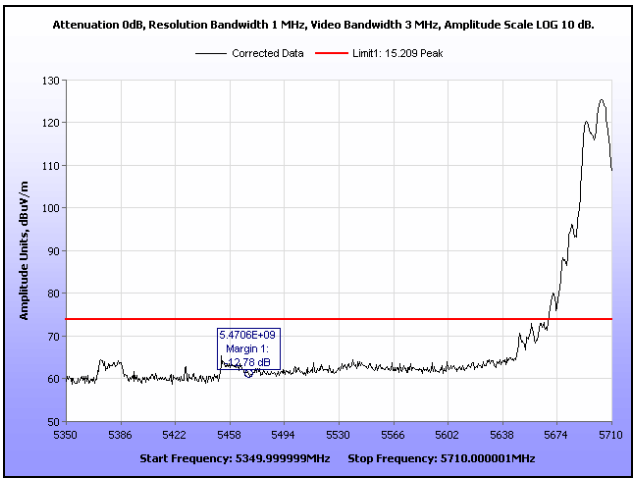
Plot 1312. Restricted Band Edge, 802.11n 40 MHz, 5670 MHz, Average, 8x8



Plot 1313. Restricted Band Edge, 802.11n 40 MHz, 5670 MHz, Peak, 8x8



Plot 1314. Restricted Band Edge, 802.11n 40 MHz, 5710 MHz, Average, 8x8



Plot 1315. Restricted Band Edge, 802.11n 40 MHz, 5710 MHz, Peak, 8x8

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(f) Maximum Permissible Exposure

Test Requirement(s): **§15.407(f):** U-NII devices are subject to the radio frequency radiation exposure requirements specified in §1.1307(b), §2.1091 and §2.1093 of this chapter, as appropriate. All equipment shall be considered to operate in a "general population/uncontrolled" environment.

RF Exposure Requirements: **§1.1307(b)(1) and §1.1307(b)(2):** Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

RF Radiation Exposure Limit: **§1.1310:** As specified in this section, the Maximum Permissible Exposure (MPE) Limit shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in Sec. 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of Sec. 2.1093 of this chapter.

MPE Limit: EUT's operating frequencies @ 5250-5350 MHz and 5470 – 5725 MHz; **Limit for Uncontrolled exposure: 1 mW/cm^2 or 10 W/m^2**

Equation from page 18 of OET 65, Edition 97-01

$$S = PG / 4\pi R^2 \quad \text{or} \quad R = \sqrt{(PG / 4\pi S)}$$

where, S = Power Density (mW/cm^2)
P = Power Input to antenna (mW)
G = Antenna Gain (numeric value)
R = Distance (cm)

Test Results:

FCC									
Frequency (MHz)	Con. Pwr. (dBm)	Con. Pwr. (mW)	Ant. Gain (dBi)	Ant. Gain numeric	Pwr. Density (mW/cm^2)	Limit (mW/cm^2)	Margin	Distance (cm)	Result
5670	21.29	134.586	8.5	7.079	0.18955	1	0.81045	20	Pass

FCC									
Frequency (MHz)	Con. Pwr. (dBm)	Con. Pwr. (mW)	Ant. Gain (dBi)	Ant. Gain numeric	Pwr. Density (mW/cm^2)	Limit (mW/cm^2)	Margin	Distance (cm)	Result
5290	20.81	120.504	8.5	7.079	0.16972	1	0.83028	20	Pass

The safe distance where Power Density is less than the MPE Limit listed above was found to be 20 cm.

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IV. DFS Requirements and Radar Waveform Description & Calibration

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A. DFS Requirements

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 17. Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

Table 18. Applicability of DFS Requirements During Normal Operation

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Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 19. DFS Detection Thresholds for Master or Client Devices Incorporating DFS

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. **Note 2:** The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. **Note 3:** During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 20. DFS Response Requirement Values

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B. Radar Test Waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu sec}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

A minimum of 30 unique waveforms are required for each of the short pulse radar types 2 through 4. If more than 30 waveforms are used for short pulse radar types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

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Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (Microseconds)
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738
13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

Table 21. Pulse Repetition Intervals Values for Test A

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Long Pulse Radar Test Waveform

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Bursts	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse radar test signal. If more than 30 waveforms are used for the Long Pulse radar test signal, then each additional waveform must also be unique and not repeated from the previous waveforms.

Each waveform is defined as follows:

1) The transmission period for the Long Pulse Radar test signal is 12 seconds.
2) There are a total of 8 to 20 Bursts in the 12 second period, with the number of Bursts being randomly chosen. This number is Burst_Count.
3) Each Burst consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each Burst within the 12 second sequence may have a different number of pulses.
4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a Burst will have the same pulse width. Pulses in different Bursts may have different pulse widths.
5) Each pulse has a linear FM chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a Burst will have the same chirp width. Pulses in different Bursts may have different chirp widths. The chirp is centered on the pulse. For example, with radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.
6) If more than one pulse is present in a Burst, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a Burst, the time between the first and second pulses is chosen independently of the time between the second and third pulses.
7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to Burst_Count. Each interval is of length (12,000,000 / Burst_Count) microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and [(12,000,000 / Burst_Count) – (Total Burst Length) + (One Random PRI Interval)] microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each Burst is chosen independently.

A representative example of a Long Pulse radar test waveform:

1) The total test signal length is 12 seconds.
2) 8 Bursts are randomly generated for the Burst_Count.
3) Burst 1 has 2 randomly generated pulses.
4) The pulse width (for both pulses) is randomly selected to be 75 microseconds.
5) The PRI is randomly selected to be at 1213 microseconds.
6) Bursts 2 through 8 are generated using steps 3 – 5.
7) Each Burst is contained in even intervals of 1,500,000 microseconds. The starting location for Pulse 1, Burst 1 is randomly generated (1 to 1,500,000 minus the total Burst 1 length + 1 random PRI interval) at the 325,001 microsecond step. Bursts 2 through 8 randomly fall in successive 1,500,000 microsecond intervals (i.e. Burst 2 falls in the 1,500,001 – 3,000,000 microsecond range).

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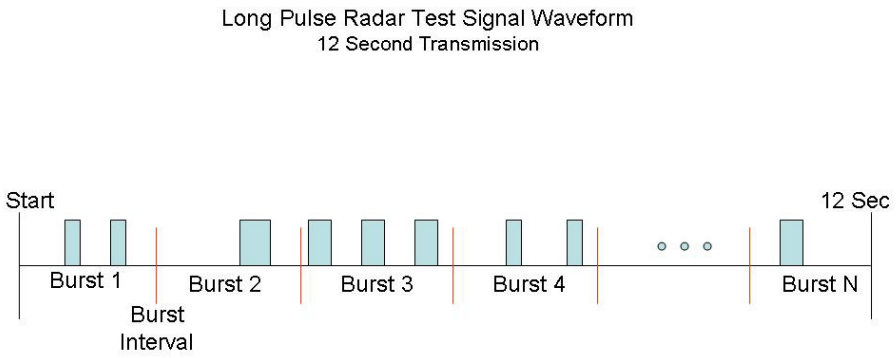

Figure 2. Long Pulse Radar Test Signal Waveform

Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	.333	300	70%	30

For the Frequency Hopping Radar Type, the same *Burst* parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected1 from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

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C. Radar Waveform Calibration

Calibration of the DFS test was done using a radiated method. A signal generator capable of producing all radar pulse types (0-6) was connected to a transmitting antenna. A receive antenna, through an external pre-amp was connected to a spectrum analyzer. The spectrum analyzer was set to a zero span with a peak detector and an RBW and VBW of 3 MHz. The transmit and receive antennas were vertically polarized during this calibration.

With the signal generator and spectrum analyzer tuned to the test frequency, each radar pulse was triggered and observed on the spectrum analyzer. The DFS Detection Threshold was verified for each radar pulse type (0-6).

During this process there were no transmissions by either the Master or Client Device.

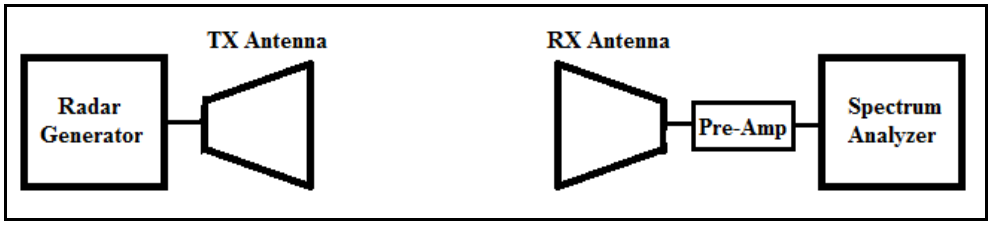
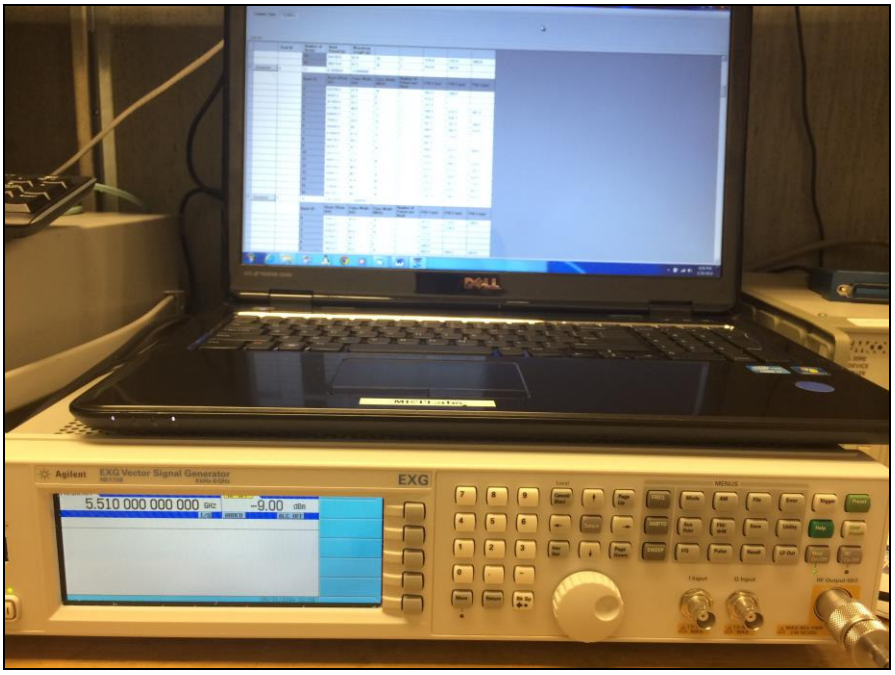


Figure 3. Radiated DFS Calibration Block Diagram



Photograph 1. DFS Radar Test Signal Generator

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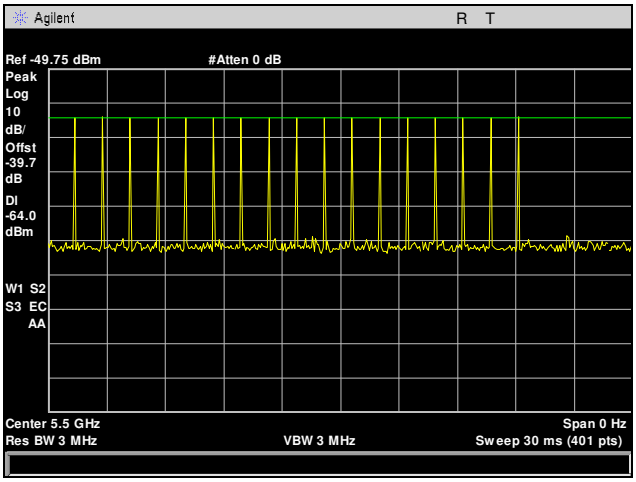
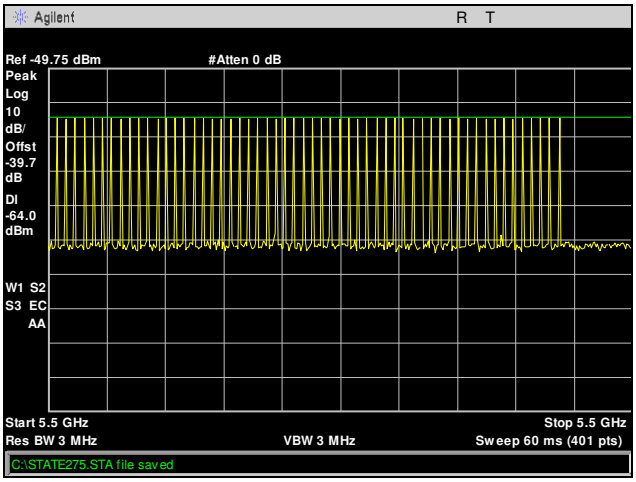
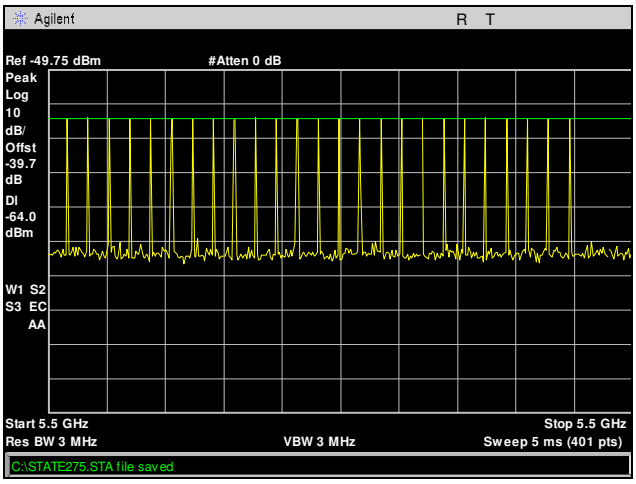
Radar Waveform Calibration, 5500 MHz



Plot 1316. Radar Waveform Calibration, Radar Type 0, 5500 MHz



Plot 1317. Radar Waveform Calibration, Radar Type 1, 5500 MHz



Plot 1318. Radar Waveform Calibration, Radar Type 2, 5500 MHz

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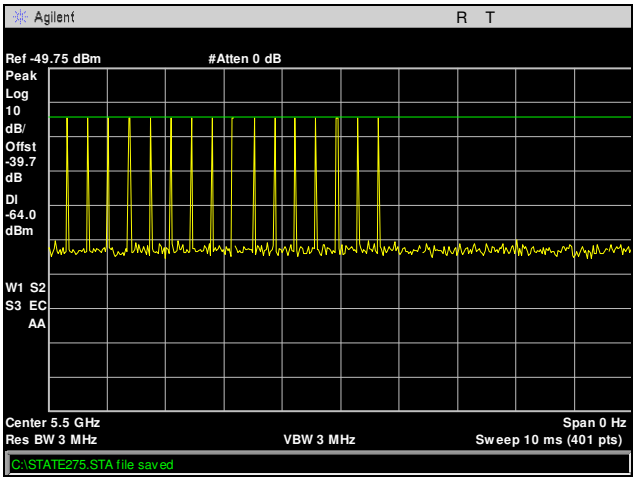
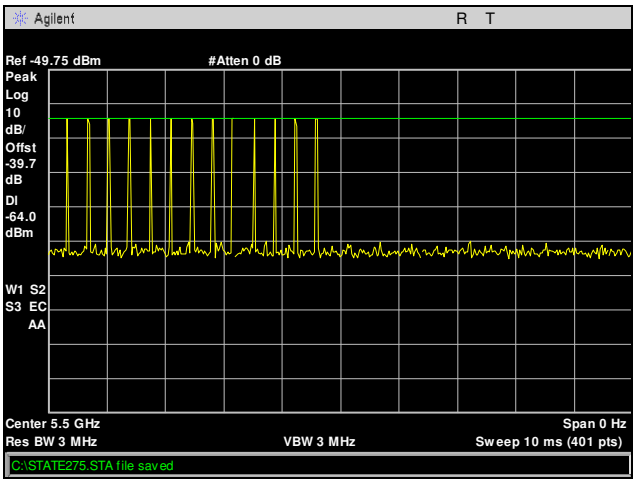
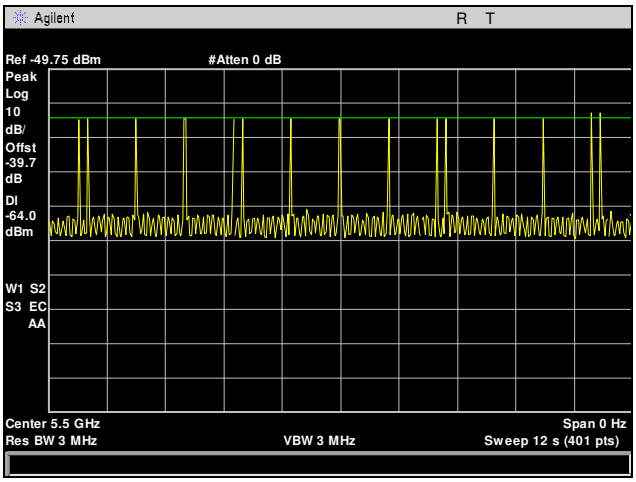


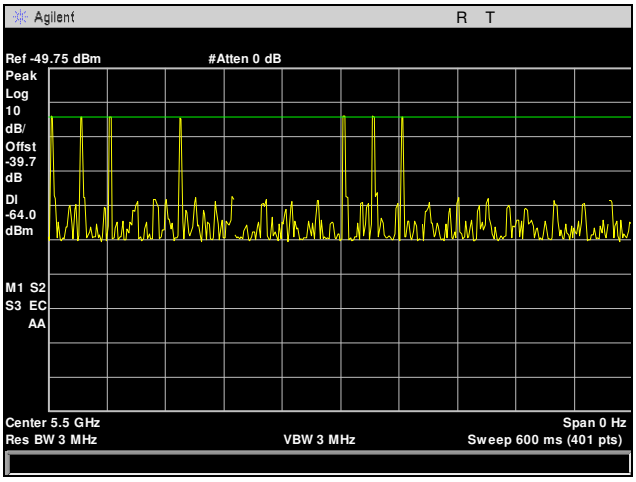
Plot 1319. Radar Waveform Calibration, Radar Type 3, 5500 MHz



Plot 1320. Radar Waveform Calibration, Radar Type 4, 5500 MHz

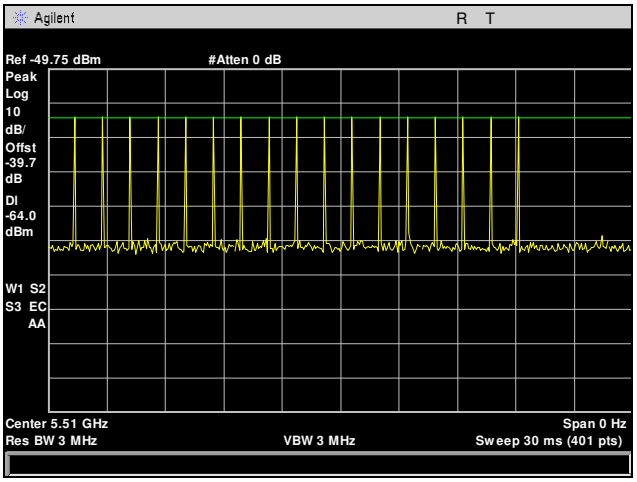


Plot 1321. Radar Waveform Calibration, Radar Type 5, 5500 MHz

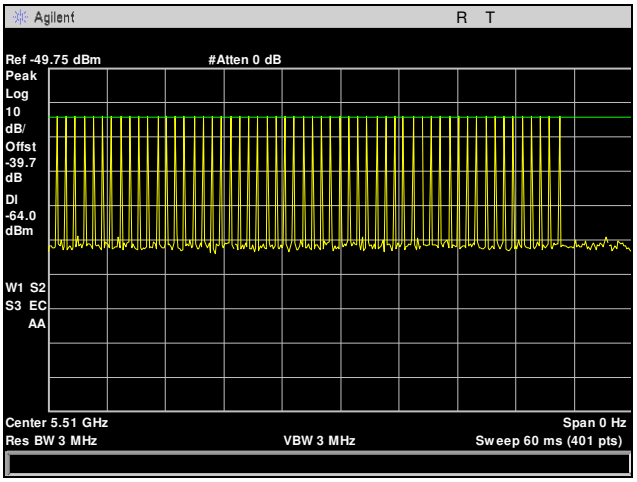


Plot 1322. Radar Waveform Calibration, Radar Type 6, 5500 MHz

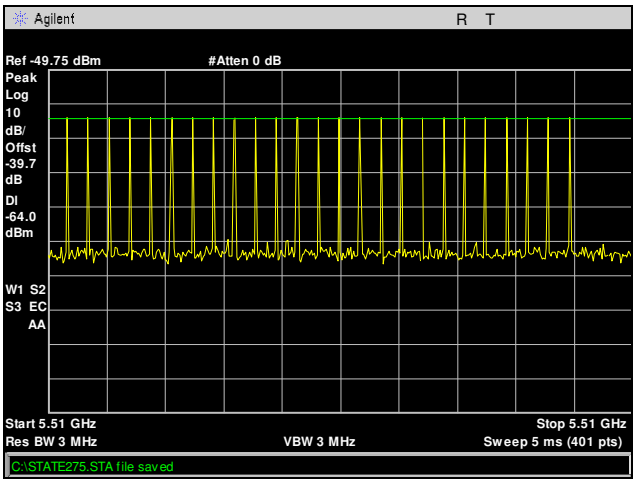
Radar Waveform Calibration, 5510 MHz



Plot 1323. Radar Waveform Calibration, Radar Type 0, 5510 MHz



Plot 1324. Radar Waveform Calibration, Radar Type 1, 5510 MHz



Plot 1325. Radar Waveform Calibration, Radar Type 2, 5510 MHz

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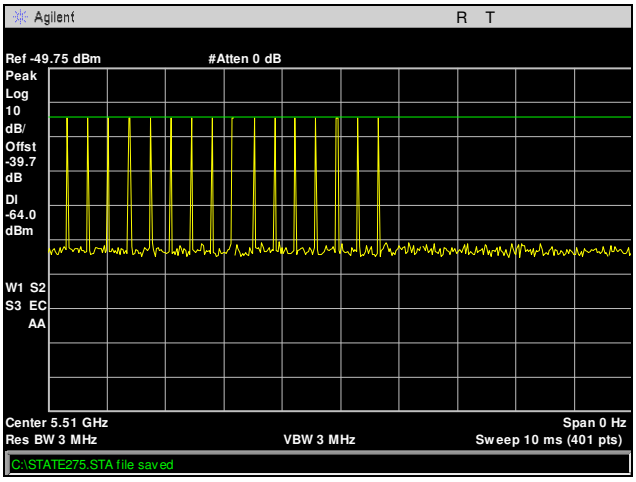
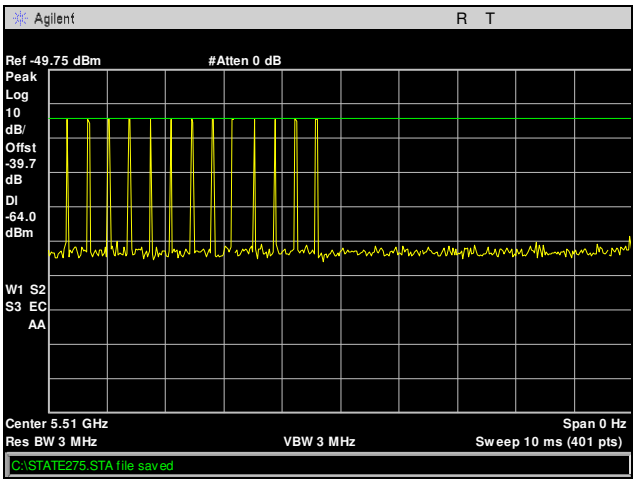
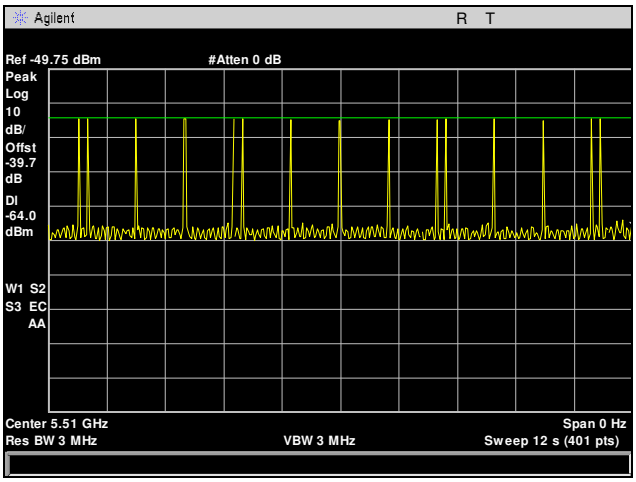


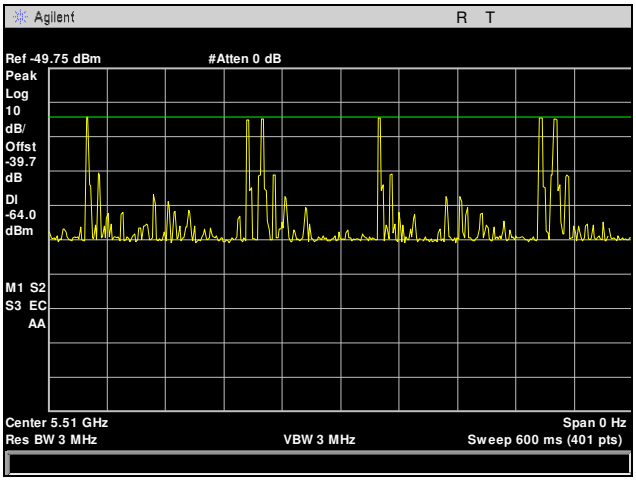
Plot 1326. Radar Waveform Calibration, Radar Type 3, 5510 MHz



Plot 1327. Radar Waveform Calibration, Radar Type 4, 5510 MHz

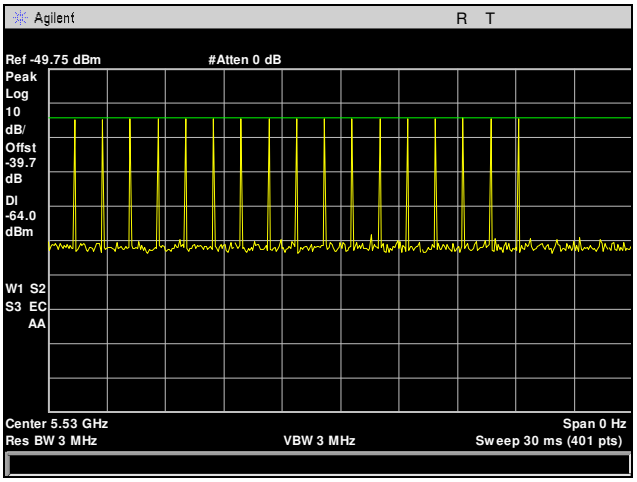


Plot 1328. Radar Waveform Calibration, Radar Type 5, 5510 MHz

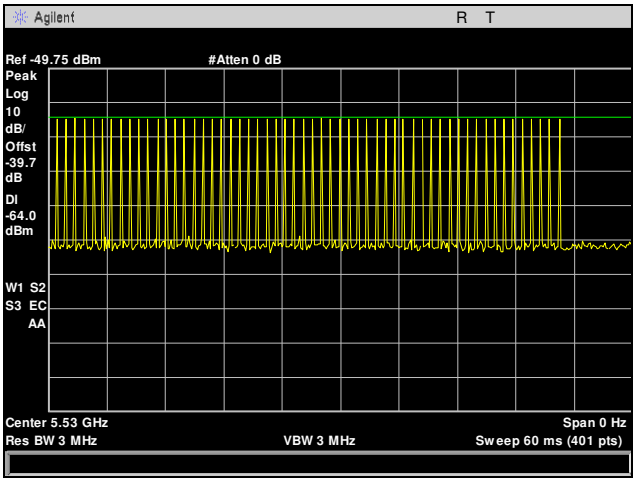


Plot 1329. Radar Waveform Calibration, Radar Type 6, 5510 MHz

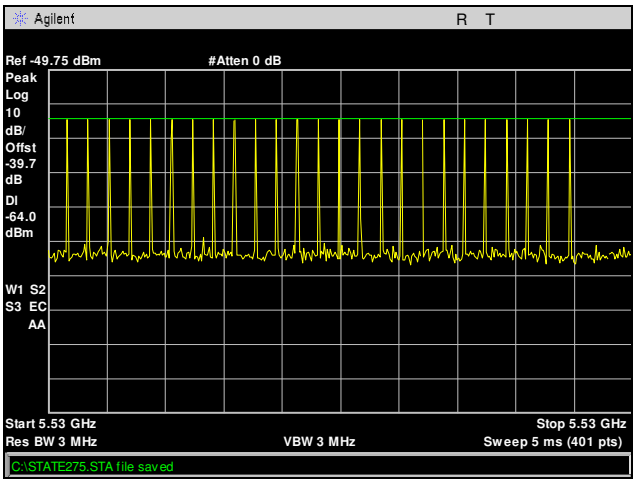
Radar Waveform Calibration, 5530 MHz



Plot 1330. Radar Waveform Calibration, Radar Type 0, 5530 MHz



Plot 1331. Radar Waveform Calibration, Radar Type 1, 5530 MHz



Plot 1332. Radar Waveform Calibration, Radar Type 2, 5530 MHz

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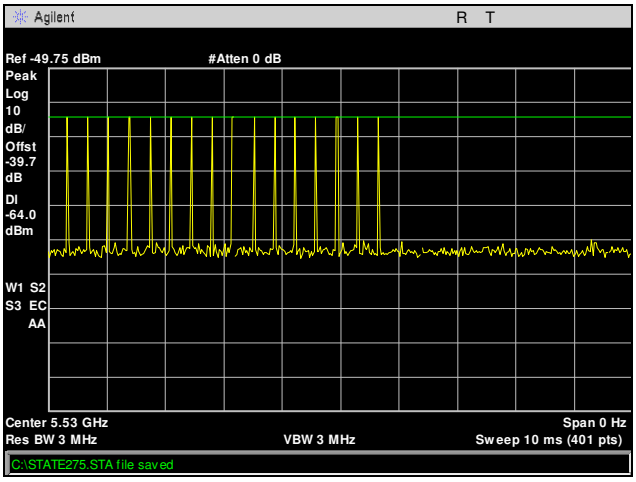
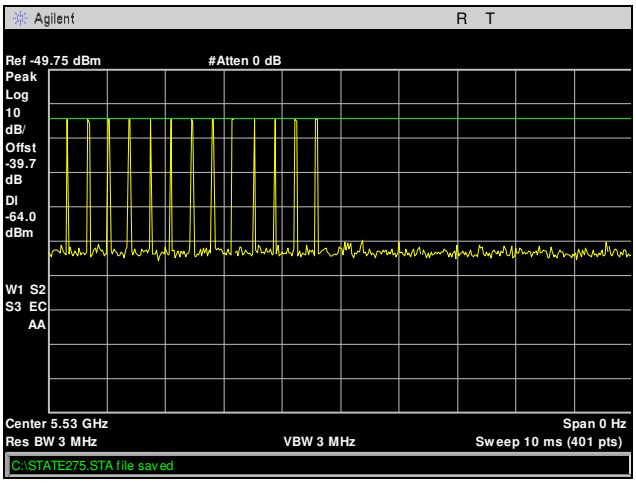
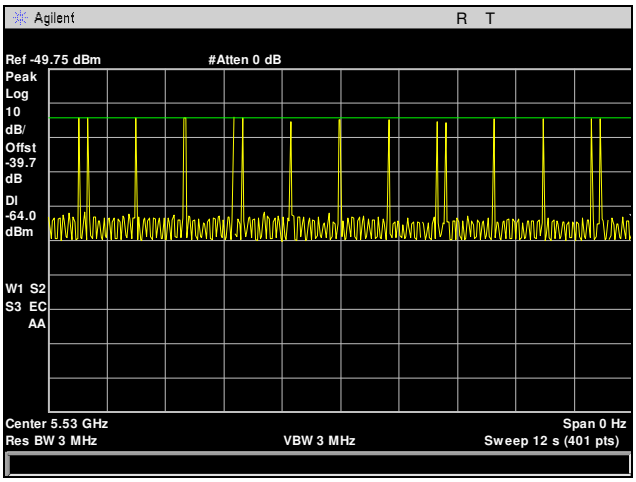


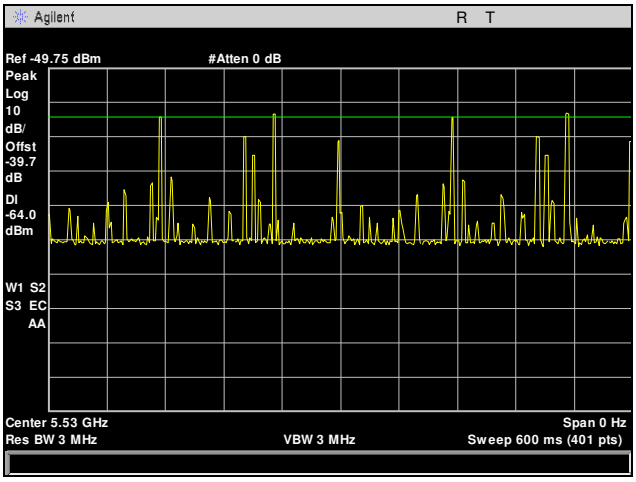
Plot 1333. Radar Waveform Calibration, Radar Type 3, 5530 MHz



Plot 1334. Radar Waveform Calibration, Radar Type 4, 5530 MHz

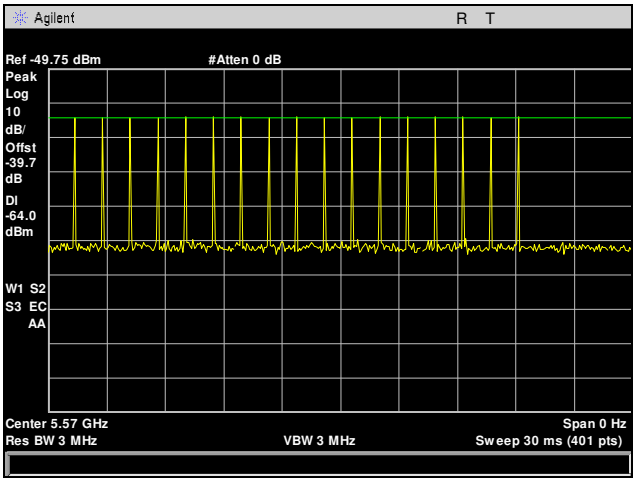


Plot 1335. Radar Waveform Calibration, Radar Type 5, 5530 MHz

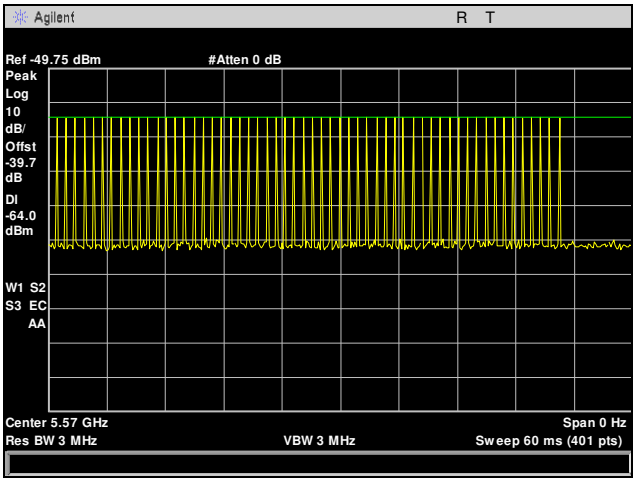


Plot 1336. Radar Waveform Calibration, Radar Type 6, 5530 MHz

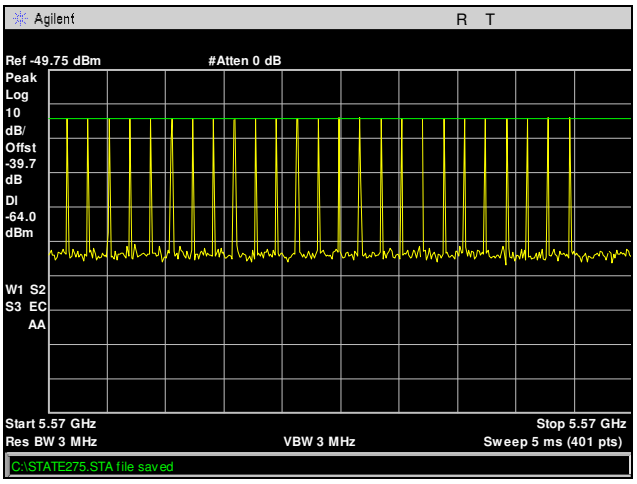
Radar Waveform Calibration, 5570 MHz



Plot 1337. Radar Waveform Calibration, Radar Type 0, 5570 MHz



Plot 1338. Radar Waveform Calibration, Radar Type 1, 5570 MHz



Plot 1339. Radar Waveform Calibration, Radar Type 2, 5570 MHz

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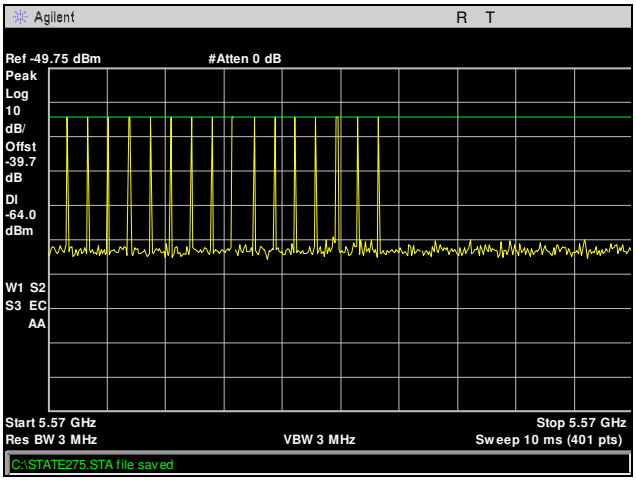
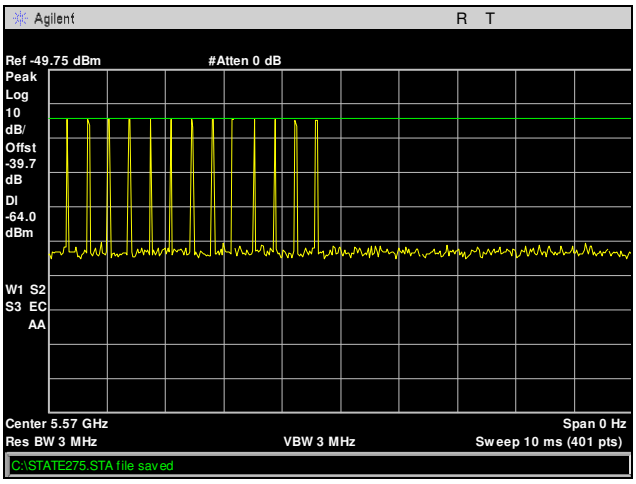
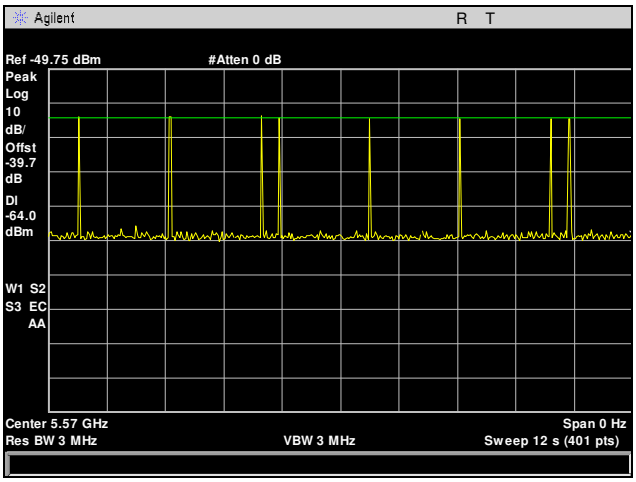


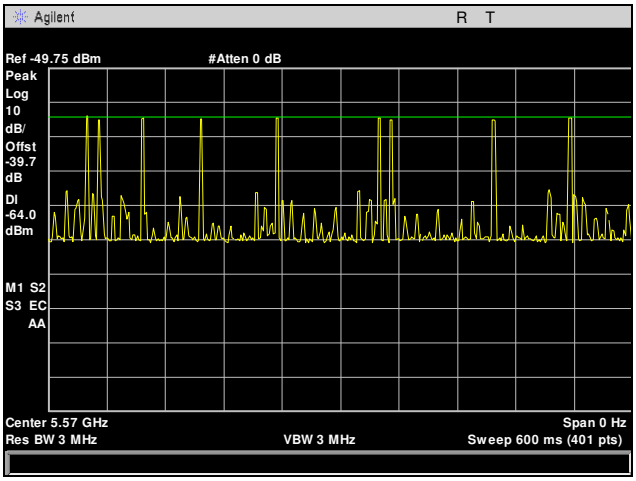
Plot 1340. Radar Waveform Calibration, Radar Type 3, 5570 MHz



Plot 1341. Radar Waveform Calibration, Radar Type 4, 5570 MHz



Plot 1342. Radar Waveform Calibration, Radar Type 5, 5570 MHz



Plot 1343. Radar Waveform Calibration, Radar Type 6, 5570 MHz

V. DFS Test Procedure and Test Results

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A. DFS Test Setup

1. A spectrum analyzer is used as a monitor to verify that the Unit Under Test (EUT) has vacated the Channel within the Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and subsequent Channel move. It is also used to monitor EUT transmissions during the Channel Availability Check Time.
2. The test setup, which consists of test equipment and equipment under test (EUT), is diagrammed in Figure 4.

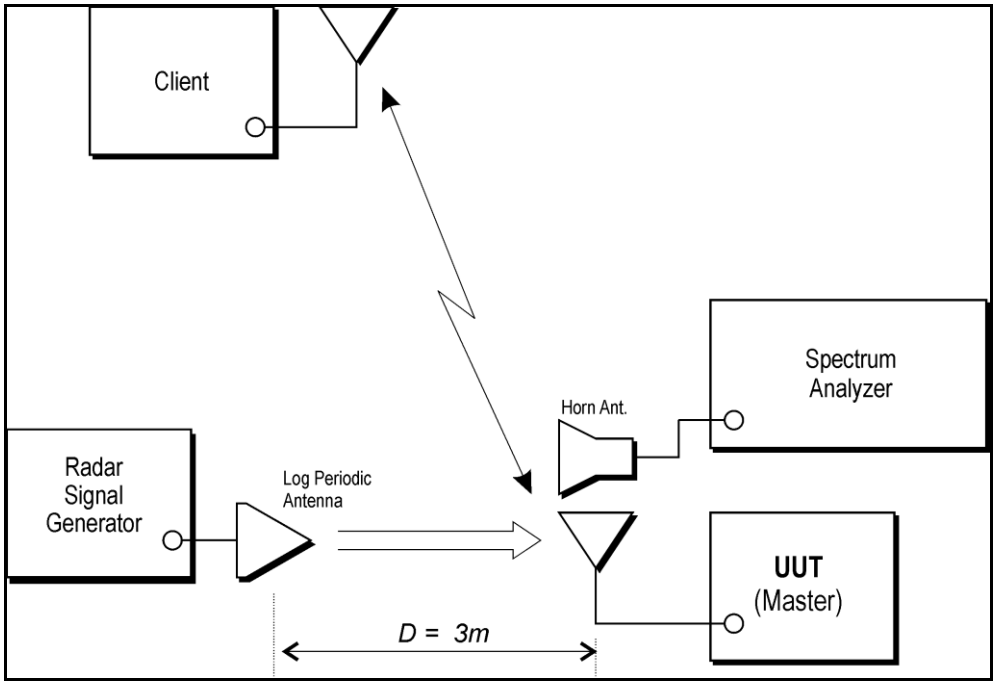

Figure 4. Test Setup Diagram

B. Description of Master Device

1. Operating Frequency Range: 5150 – 5850 MHz
2. Modes of Operation: OFDM
3. List all antennas and associated gains: 8.5 dBi
4. List output power ranges: 17.71 dBm – 21.29 dBm
5. List antenna impedance: 50 Ohms
6. Antenna gain verification: Not verified
7. State test file that is transmitted: Video: FCC DFS Test. MP4
8. TCP description: EIRP less than 500 mW
9. Time for master to complete its power-on-cycle: 180s
10. Describe EUT's uniform channel spreading: The device employs a 20MHz, 40MHz, 80MHz and 160MHz channel separation.

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C. UNII Detection Bandwidth

Test Requirement(s): **KDB 905462 §5.1** All BW modes must be tested.

§5.3 A minimum 100% detection rate is required across a EUT's 99% bandwidth.

Test Procedure: The EUT was set up as a standalone device (no associated Client or Master, as appropriate) and no traffic.

A single radar burst of type 0 and the center frequency was generated and the response of the EUT was noted. This was repeated for a minimum of 10 trials. The minimum percentage of detection was 90%, as per the KDB 905462.

Starting at the center frequency of the EUT operating Channel, the radar frequency was increased in 5 MHz steps, repeating the minimum of 10 trials, until the detection rate fell below the U-NII Detection Bandwidth criterion (90%). The measurement was repeated in 1MHz steps at frequencies 5 MHz below where the detection rate began to fall. The highest frequency (denoted as F_H) at which detection was greater or equal than the U-NII Detection Bandwidth criterion (90%) was recorded.

Starting at the center frequency of the EUT operating Channel, the radar frequency was decreased in 5 MHz steps, repeating the minimum of 10 trials, until the detection rate fell below the U-NII Detection Bandwidth criterion (90%). The measurement was repeated in 1MHz steps at frequencies 5 MHz below where the detection rate began to fall. The lowest frequency (denoted as F_L) at which detection was greater or equal than the U-NII Detection Bandwidth criterion (90%) was recorded.

The U-NII Detection Bandwidth was calculated as follow:

U-NII Detection Bandwidth = FH – FL

Test Results: The EUT was compliant with the requirements of this section.

Test Engineer(s): Jun Qi

Test Date(s): 11/11/16

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EUT Frequency- 5500MHz											
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5489(FL)	1	1	1	1	1	1	1	1	1	1	100
5490	1	1	1	1	1	1	1	0	1	1	90
5491	1	1	1	1	1	1	1	1	0	1	90
5492	1	1	1	1	1	1	1	1	1	0	90
5493	1	1	1	1	1	1	1	1	1	1	100
5494	1	1	1	1	1	1	1	1	1	1	100
5495	1	1	1	1	1	1	1	1	1	1	100
5496	1	1	1	1	1	1	1	1	1	1	100
5497	1	1	1	1	1	1	1	1	1	1	100
5498	1	1	1	1	1	1	1	1	1	1	100
5499	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5501	1	1	1	1	1	1	1	1	1	1	100
5502	1	1	1	1	1	1	1	1	1	1	100
5503	1	1	1	1	1	1	1	1	1	1	100
5504	1	1	1	1	1	1	1	1	1	1	100
5505	1	1	1	1	1	1	1	1	1	1	100
5506	1	1	1	1	1	1	1	1	1	1	100
5507	1	1	1	1	1	1	1	1	1	1	100
5508	1	1	1	1	1	1	1	1	1	1	100
5509	1	1	1	1	1	1	1	1	1	1	100
5510(FH)	1	1	1	1	1	1	1	1	1	1	100
Overall Detection Percentage											98.5%
Detection Bandwidth = f_h - f_l = 5510MHz-5489MHz = 21MHz											
EUT 99% Bandwidth = 17.4603MHz											
OBW* 100% = 17.4603 MHz											

Table 22. Detection Bandwidth, 11n, 20MHz BW, 5500 MHz

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EUT Frequency- 5510MHz											
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5490(FL)	1	1	1	1	1	1	1	1	1	1	100
5491	1	1	0	1	1	1	1	1	1	1	90
5492	1	1	1	1	1	1	1	1	1	1	100
5493	1	1	1	1	1	1	1	0	1	1	90
5494	1	1	1	1	1	1	1	1	1	1	100
5495	1	1	1	1	1	1	1	1	1	1	100
5496	1	1	1	1	1	1	1	1	1	1	100
5497	1	1	1	1	1	1	1	1	1	1	100
5498	1	1	1	1	1	1	1	1	1	1	100
5499	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5501	1	1	1	1	1	1	1	1	1	1	100
5502	1	1	1	1	1	1	1	1	1	1	100
5503	1	1	1	1	1	1	1	1	1	1	100
5504	1	1	1	1	1	1	1	1	1	1	100
5505	1	1	1	1	1	1	1	1	1	1	100
5506	1	1	1	1	1	1	1	1	1	1	100
5507	1	1	0	1	1	1	1	1	1	1	90
5508	1	1	1	1	1	1	1	1	1	1	100
5509	1	1	1	1	1	1	1	1	1	1	100
5510	1	1	1	1	1	1	1	1	1	1	100
5511	1	1	1	1	1	1	1	1	1	1	100
5512	1	1	1	1	1	1	1	1	1	1	100
5513	1	1	1	1	1	1	1	1	1	1	100
5514	1	1	1	1	1	1	1	1	1	1	100
5515	1	1	0	1	1	1	1	1	1	1	90
5516	1	1	1	1	1	1	1	1	1	1	100
5517	1	1	1	1	1	1	1	1	1	1	100
5518	1	1	1	1	1	1	1	1	1	1	100
5519	1	1	1	1	1	1	1	1	1	1	100
5520	1	1	1	1	1	1	1	1	1	1	100
5521	1	1	1	1	1	1	1	1	1	1	100
5522	1	1	1	1	1	1	1	1	1	1	100
5523	1	1	1	1	1	1	1	1	1	1	100
5524	1	1	1	1	1	1	1	1	1	1	100
5525	1	1	1	1	1	1	1	1	1	1	100
5526	1	1	1	0	1	1	1	1	1	1	90
5527	1	1	1	1	1	1	1	1	1	1	100
5528	1	1	0	1	1	1	1	1	1	1	90
5529(FH)	1	1	1	1	1	1	1	1	1	1	100
Overall Detection Percentage											98.5%
Detection Bandwidth = f_h - f_l = 5529MHz-5490MHz = 39MHz											
EUT 99% Bandwidth = 35.9169 MHz											
OBW* 100% = 35.9169 MHz											

Table 23. Detection Bandwidth, 11n, 40MHz BW, 5510 MHz

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EUT Frequency- 5530MHz											
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5491	1	1	1	1	1	1	1	1	1	1	100
5492	1	1	1	1	1	1	1	0	1	1	90
5493	1	1	1	1	1	1	1	1	1	1	100
5494	1	1	1	1	1	1	1	1	1	1	100
5495	1	0	1	1	1	1	1	1	1	1	90
5496	1	1	1	1	1	1	1	1	0	1	90
5497	1	1	1	1	1	1	1	1	0	1	90
5498	1	1	1	1	1	1	1	1	1	1	100
5499	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5501	1	1	1	1	1	1	1	1	1	1	100
5502	1	1	1	1	1	1	1	1	1	1	100
5503	1	1	1	1	1	1	1	1	1	1	100
5504	1	1	1	1	1	1	1	1	1	1	100
5505	1	1	1	1	1	1	1	1	1	1	100
5506	1	1	1	1	1	1	1	1	1	1	100
5507	1	1	1	1	1	0	1	1	1	1	90
5508	1	1	1	1	1	1	1	1	1	1	100
5509	1	1	1	1	1	1	1	1	1	1	100
5510	1	1	1	1	1	1	1	1	1	1	100
5511	1	1	1	1	1	1	1	1	1	1	100
5512	1	1	1	1	1	1	1	1	1	1	100
5513	1	1	1	1	1	1	1	1	1	1	100
5514	1	1	1	1	1	1	1	0	1	1	90
5515	1	1	1	1	1	1	1	1	1	1	100
5516	1	1	1	1	1	1	1	1	1	1	100
5517	1	1	1	1	1	1	1	1	1	1	100
5518	1	1	1	1	1	0	1	1	1	1	90
5519	1	1	1	1	1	1	1	1	1	1	100
5520	1	1	1	1	1	1	1	1	1	1	100
5521	1	1	1	1	1	1	1	1	1	1	100
5522	1	1	1	1	1	1	1	1	1	0	90
5523	1	1	1	1	1	1	1	1	1	1	100
5524	1	1	1	1	1	1	1	1	1	1	100
5525	1	1	1	1	1	1	1	1	1	1	100
5526	1	1	1	1	1	1	1	1	1	1	100
5527	1	1	1	1	1	1	1	1	1	1	100
5528	1	1	1	1	1	1	1	1	1	1	100
5529	1	1	1	1	1	0	1	1	1	1	90
5530	1	1	1	1	1	1	1	1	1	1	100
5531	1	1	1	1	1	1	1	1	1	1	100
5532	1	1	1	1	1	1	1	1	1	1	100
5533	1	1	1	1	1	1	1	1	1	1	100
5534	1	1	1	1	1	1	1	1	1	1	100

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5535	1	1	1	1	1	1	1	1	1	1	100
5536	1	1	1	1	1	1	1	1	1	1	100
5537	1	1	1	1	1	1	1	1	1	1	100
5538	1	1	1	1	1	1	1	1	1	1	100
5539	1	1	1	1	0	1	1	1	1	1	90
5540	1	1	1	1	1	1	1	1	1	1	100
5541	1	1	1	1	1	1	1	1	1	1	100
5542	1	1	1	1	1	1	1	1	1	1	100
5543	1	1	1	1	1	1	1	1	1	1	100
5544	1	1	1	1	1	1	1	1	1	1	100
5545	1	1	1	1	1	1	1	1	1	1	100
5546	1	1	1	1	1	1	1	1	1	1	100
5547	1	1	1	1	1	1	1	1	1	1	100
5548	1	1	1	1	1	1	1	1	1	1	100
5549	1	1	1	1	1	1	1	1	1	1	100
5550	1	1	1	1	1	1	1	1	1	1	100
5551	1	1	1	1	1	1	1	1	1	1	100
5552	1	1	1	1	1	1	1	1	1	1	100
5553	1	1	1	1	1	1	1	1	1	1	100
5554	1	1	1	1	1	1	1	1	1	1	100
5555	1	1	1	1	1	1	1	1	1	1	100
5556	1	1	1	1	1	1	1	1	1	1	100
5557	1	1	1	1	1	1	1	1	1	1	100
5558	1	1	1	1	1	0	1	1	1	1	90
5559	1	1	1	1	1	1	1	1	1	1	100
5560	1	1	1	1	1	1	1	1	1	1	100
5561	1	1	1	1	1	1	1	1	1	1	100
5562	1	1	1	1	1	1	1	1	1	1	100
5563	1	1	1	1	1	1	1	1	1	1	100
5564	1	1	1	1	1	1	1	1	1	1	100
5565	1	1	1	1	1	1	1	1	1	1	100
5566	1	1	1	1	1	1	1	1	1	1	100
5567	1	1	1	1	1	1	1	1	1	1	100
5568	1	1	1	1	1	1	1	1	1	1	100
5569	1	1	1	1	1	1	1	1	1	1	100
Overall Detection Percentage											98.6%
Detection Bandwidth = f_h - f_l = 5569MHz-5491MHz = 78MHz											
EUT 99% Bandwidth = 74.946 MHz											
OBW* 100% = 74.946 MHz											

Table 24. Detection Bandwidth, 11ac, 80MHz BW, 5530 MHz

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EUT Frequency- 5570MHz											
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5491	1	1	1	1	1	1	1	1	1	1	100
5492	1	1	1	1	1	1	1	1	1	1	100
5493	1	1	1	1	1	1	1	1	1	1	100
5494	1	1	1	1	1	1	1	1	1	1	100
5495	1	1	1	1	1	1	1	1	1	1	100
5496	1	1	1	1	1	1	1	1	1	1	100
5497	1	1	1	1	1	1	1	1	1	1	100
5498	1	1	1	1	1	1	1	1	1	1	100
5499	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5501	1	1	1	1	1	1	1	1	1	1	100
5502	1	1	1	1	1	1	1	1	1	1	100
5503	1	1	1	1	1	1	1	1	1	1	100
5504	1	1	1	1	1	1	1	0	1	1	90
5505	1	1	1	1	1	1	1	1	1	1	100
5506	1	1	1	1	1	1	1	1	1	1	100
5507	1	1	1	1	1	1	1	1	1	1	100
5508	1	1	1	1	0	1	1	1	1	1	90
5509	1	1	1	1	1	1	1	1	1	1	100
5510	1	1	1	1	1	1	1	1	1	1	100
5511	1	1	1	1	1	1	1	1	1	1	100
5512	1	1	1	1	1	1	1	1	1	1	100
5513	1	1	1	1	1	1	1	1	1	1	100
5514	1	1	1	1	1	1	1	1	1	1	100
5515	1	1	1	1	1	1	1	1	1	1	100
5516	1	1	1	1	0	1	1	1	1	1	90
5517	1	1	1	1	1	1	1	1	1	1	100
5518	1	1	1	1	1	1	1	1	1	1	100
5519	1	1	1	1	1	1	1	1	1	1	100
5520	1	1	1	1	1	1	1	1	1	1	100
5521	1	1	1	1	1	1	1	1	1	1	100
5522	1	1	1	1	1	1	1	1	1	1	100
5523	1	1	1	1	1	1	1	1	1	1	100

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5524	1	1	1	1	1	1	1	1	1	1	100
5525	1	0	1	1	1	1	1	1	1	1	90
5526	1	1	1	1	1	1	1	1	1	1	100
5527	1	1	1	1	1	0	1	1	1	1	90
5528	1	1	1	1	1	1	1	1	1	1	100
5529	1	1	1	1	1	1	1	1	1	1	100
5530	1	1	1	1	1	1	1	1	1	1	100
5531	1	1	1	1	1	1	1	1	1	1	100
5532	1	1	1	1	1	1	1	1	1	1	100
5533	1	1	1	1	1	1	1	1	1	1	100
5534	1	1	1	1	1	1	1	1	1	1	100
5535	1	1	1	1	1	1	1	1	1	1	100
5536	1	1	1	1	1	1	1	1	1	1	100
5537	1	1	1	1	1	1	1	1	1	1	100
5538	1	1	1	1	1	1	1	1	1	1	100
5539	1	1	1	1	1	1	1	1	1	1	100
5540	1	1	1	1	1	1	1	1	1	1	100
5541	1	1	1	1	1	1	1	1	1	1	100
5542	1	1	1	1	1	1	1	1	1	1	100
5543	1	1	1	1	1	1	1	1	1	1	100
5544	1	0	1	1	1	1	1	1	1	1	90
5545	1	1	1	1	1	1	1	1	1	1	100
5546	1	1	0	1	1	1	1	1	1	1	90
5547	1	1	1	1	1	1	1	1	1	1	100
5548	1	1	1	1	1	1	1	1	1	1	100
5549	1	1	1	1	1	1	1	1	1	1	100
5550	1	1	1	1	1	1	1	1	1	1	100
5551	1	1	1	1	1	1	1	1	1	1	100
5552	1	1	1	1	1	1	1	1	1	1	100
5553	1	1	1	1	1	1	1	1	1	1	100
5554	1	1	1	1	1	1	1	1	1	1	100
5555	1	1	1	1	1	1	1	1	1	1	100
5556	1	1	1	1	1	1	1	1	1	1	100
5557	1	1	1	1	1	1	1	1	1	1	100
5558	1	1	1	1	1	1	1	1	1	1	100
5559	1	1	1	1	1	1	1	1	1	1	100
5560	1	1	1	1	1	1	1	1	1	1	100
5561	1	1	1	1	1	1	1	1	1	1	100

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5562	1	1	1	1	1	1	1	1	1	1	100
5563	1	1	1	1	1	1	1	1	1	1	100
5564	1	1	1	1	1	1	1	1	1	1	100
5565	1	1	1	1	1	1	1	1	1	1	100
5566	1	1	1	1	1	1	1	1	0	1	90
5567	1	1	1	1	1	1	1	1	1	1	100
5568	1	1	1	1	1	1	1	1	1	1	100
5569	1	1	1	1	0	1	1	1	1	1	90
5570	1	1	1	1	1	1	1	1	1	1	100
5571	1	1	1	1	1	1	1	1	1	1	100
5572	1	1	1	1	1	1	1	1	1	1	100
5573	1	1	1	1	1	1	1	1	1	1	100
5574	1	1	1	1	1	1	1	1	1	1	100
5575	1	1	1	1	1	1	1	1	1	1	100
5576	1	1	1	1	1	1	1	1	1	1	100
5577	1	1	1	1	1	1	1	1	1	1	100
5578	1	1	1	1	1	1	1	1	1	1	100
5579	1	1	1	1	1	1	1	1	1	1	100
5580	1	1	1	1	1	1	1	1	1	1	100
5581	1	1	1	1	1	1	1	1	1	1	100
5582	1	1	1	1	1	1	1	1	1	1	100
5583	1	1	1	1	1	1	1	1	1	1	100
5584	1	0	1	1	1	1	1	1	1	1	90
5585	1	1	1	1	1	1	1	1	1	1	100
5586	1	1	1	1	1	1	1	1	1	1	100
5587	1	1	1	1	1	1	1	1	1	1	100
5588	1	1	1	1	1	1	1	1	1	1	100
5589	1	1	1	1	1	1	1	1	1	1	100
5590	1	1	1	1	1	1	1	1	1	1	100
5591	1	1	1	1	1	1	1	1	1	1	100
5592	1	1	1	1	1	1	1	1	1	1	100
5593	1	1	1	1	1	1	0	1	1	1	90
5594	1	1	1	1	1	1	1	1	1	1	100
5595	1	1	1	1	1	1	1	1	1	1	100
5596	1	1	1	1	1	1	1	1	1	1	100
5597	1	1	1	1	1	1	1	1	1	1	100
5598	1	1	1	1	1	1	1	1	1	1	100
5599	1	1	1	1	1	1	1	1	1	1	100

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5600	1	1	1	1	1	1	1	1	1	1	100
5601	1	1	1	1	1	1	1	1	1	1	100
5602	1	1	1	1	1	1	1	1	1	1	100
5603	1	1	1	1	1	1	1	1	1	1	100
5604	1	1	1	1	1	1	1	1	1	1	100
5605	1	1	1	1	1	1	1	1	1	1	100
5606	1	1	1	1	1	1	1	1	1	1	100
5607	1	1	1	1	1	1	1	1	1	1	100
5608	1	1	1	1	1	1	1	1	1	1	100
5609	1	1	1	1	1	1	1	1	1	1	100
5610	1	1	1	1	1	1	1	1	1	1	100
5611	0	1	1	1	1	1	1	1	1	1	90
5612	1	1	1	1	1	1	1	1	1	1	100
5613	1	1	1	1	1	1	1	1	1	1	100
5614	1	1	1	1	1	1	1	1	1	1	100
5615	1	1	1	1	1	1	1	1	1	1	100
5616	1	1	1	1	1	1	1	1	1	1	100
5617	1	1	1	1	1	1	1	1	1	1	100
5618	1	1	1	1	1	1	1	1	1	1	100
5619	1	1	1	1	1	1	1	1	1	1	100
5620	1	1	1	1	1	1	1	1	1	1	100
5621	1	1	1	1	1	1	1	1	1	1	100
5622	1	1	1	1	1	1	1	1	1	1	100
5623	1	1	1	1	1	1	1	1	1	1	100
5624	1	1	1	1	0	1	1	1	1	1	90
5625	1	1	1	1	1	1	1	1	1	1	100
5626	1	1	1	1	1	1	1	1	1	1	100
5627	1	1	1	1	1	1	1	1	1	1	100
5628	1	1	1	1	1	1	1	1	1	1	100
5629	1	1	1	1	1	1	1	0	1	1	90
5630	1	1	1	1	1	1	1	1	1	1	100
5631	1	1	1	1	1	1	1	1	1	1	100
5632	1	1	1	1	1	1	1	1	1	1	100
5633	1	1	1	1	1	1	1	1	1	1	100
5634	1	1	1	1	1	1	1	1	1	1	100
5635	1	1	1	1	1	1	1	1	1	1	100
5636	1	1	1	1	1	1	1	1	1	1	100
5637	1	1	1	1	1	1	1	1	1	1	100

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5638	1	1	1	1	1	1	1	1	1	1	100
5639	1	0	1	1	1	1	1	1	1	1	90
5640	1	1	1	1	1	1	1	1	1	1	100
5641	1	1	1	1	1	1	1	1	1	1	100
5642	1	1	1	1	1	1	1	1	1	1	100
5643	1	1	1	1	1	1	1	1	1	1	100
5644	1	1	1	1	1	1	1	1	1	1	100
5645	1	1	1	1	1	1	1	1	1	1	100
5646	1	1	1	1	1	1	1	1	1	1	100
5647	1	1	1	1	1	1	1	1	1	1	100
5648	1	1	1	1	1	1	1	1	1	1	100
5649	1	1	1	1	1	1	1	1	1	1	100
5650	1	1	1	1	1	1	1	1	1	1	100
Overall Detection Percentage											99.1%
Detection Bandwidth = f_h - f_l = 5650MHz-5491MHz = 159MHz											
EUT 99% Bandwidth = 151.7203 MHz											
OBW* 100% = 151.7203 MHz											

Table 25. Detection Bandwidth, 11ac, 160MHz BW, 5570 MHz

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D. Channel Availability Check Time

Test Requirements: **§15.407(h)(2)(ii)** A U-NII device shall check if there is a radar system already operating on the channel before it can initiate a transmission on a channel and when it has to move to a new channel. The U-NII device may start using the channel if no radar signal with a power level greater than the interference threshold values listed in paragraph (h)(2) of this section, is detected within 60 seconds.

Test Procedure: The spectrum analyzer was set to a zero span mode with a 3 MHz RBW and 3 MHz VBW on the test channel with a 2.5 minute sweep time. The spectrum analyzer's sweep was started at the same time power was applied to the U-NII device.

For the initial Channel Availability Check Time no radar burst was generated and the EUT was monitored for how long after startup transmission started.

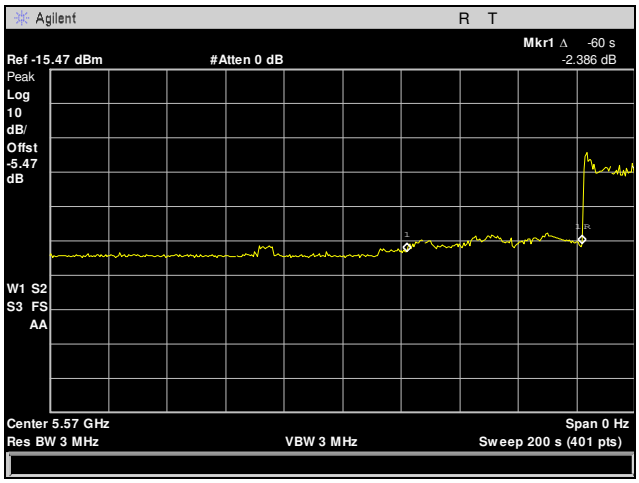
For radar burst at the beginning of the Channel Availability Check Time a short pulse radar type (0-4) with a level equal to the DFS Detection Threshold + 1 dB was generated within the first 6 seconds of the EUT's channel availability check. The EUT was monitored to ensure that it did not start transmitting on the channel.

For radar burst at the end of the Channel Availability Check Time a short pulse radar type (0-4) with a level equal to the DFS Detection Threshold + 1 dB was generated within the last 6 seconds of the EUT's channel availability check. The EUT was monitored to ensure that it did not start transmitting on the channel.

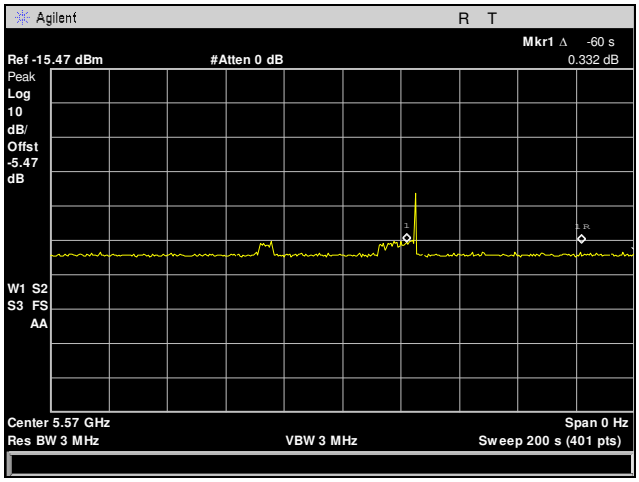
Test Results: The EUT was compliant with the requirements of this section.

Test Engineer(s): Jun Qi

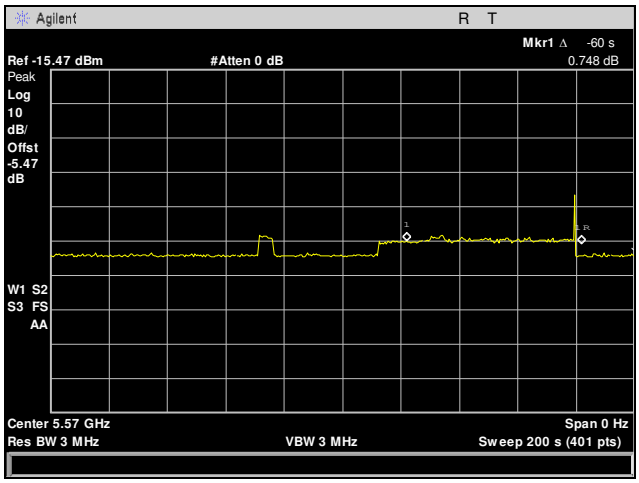
Test Date(s): 11/11/16



Plot 1344. Initial Channel Availability Check Time (CACT)



Plot 1345. 2s After Start, CACT, 160 MHz, Channel 100



Plot 1346. 2s Before End, CACT, 160 MHz, Channel 100

E. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time, and Non-Occupancy Period

Test Requirements: **§15.407(h)(2)(iii)** Channel Move Time. After a radar's presence is detected, all transmissions shall cease on the operating channel within 10 seconds. Transmissions during this period shall consist of normal traffic for a maximum of 200 ms after detection of the radar signal. In addition, intermittent management and control signals can be sent during the remaining time to facilitate vacating the operating channel.

§15.407(h)(2)(iv) Non-occupancy Period. A channel that has been flagged as containing a radar system, either by a channel availability check or in-service monitoring, is subject to a non-occupancy period of at least 30 minutes. The non-occupancy period starts at the time when the radar system is detected.

KDB 905462 §5.1 Test using widest BW mode available.

Test Procedure: The EUT was setup as a Master device and associated with a Client device. A test file was streamed from the Master device to the Client device for the entire period of the test. A Radar Burst of type 0 with a level equal to the DFS Detection Threshold + 1 dB was used.

A radar pulse was generated while the EUT was transmitting. A spectrum analyzer set to a zero span was used to observe the transmission of the EUT at the end of the burst.

Test Results: The EUT was compliant with the requirements of this section.

Test Engineer(s): Jun Qi

Test Date(s): 11/11/16

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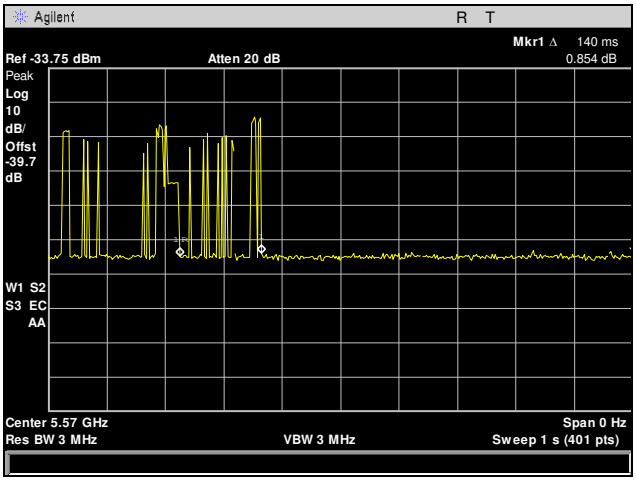
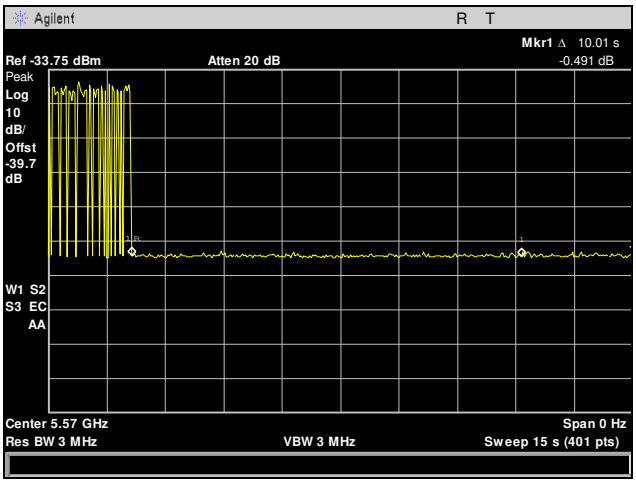
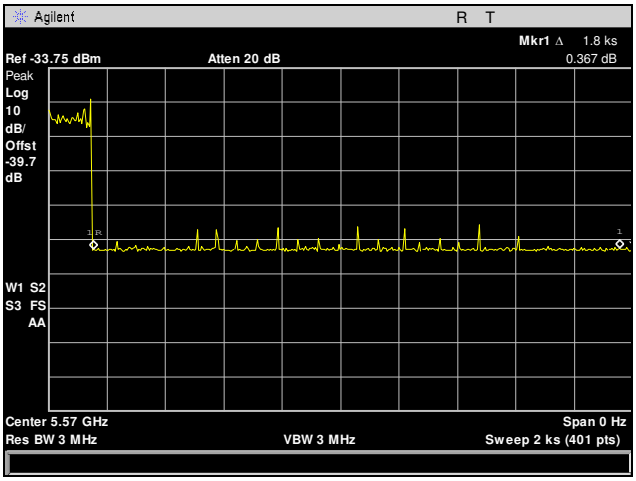


Plot 1347. Channel Move Time, 1s, 160 MHz, Channel 100



Plot 1348. Channel Move Time, 15s, 160 MHz, Channel 100



Plot 1349. Non-Occupancy Period, 160 MHz, Channel 100

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F. Statistical Performance Check

Test Requirements: **KDB 905462 §5.1** All BW modes must be tested.

KDB 905462: Each of the Radar Pulse types requires a minimum percentage of detections while the EUT is transmitting and listening for potential radar systems operating within the DFS Detection Bandwidth.
For Short Pulse Radar types the aggregate minimum percentage of detections is 80 percent.
Fort the Long Pulse Radar types the minimum percentage of detections is 80 percent.
For the Frequency Hopping Radar type the minimum percentage of detections is 70 percent.

Test Procedure: The EUT was setup as a Master device and associated with a Client device. A test file was streamed from the Master device to the Client device for the entire period of the test. The EUT was also set to a test mode as to demonstrate when the detection occurred without reseting the device between trials.
A Radar Burst of each type (1-6) with a level equal to the DFS Detection Threshold + 1 dB was used. The frequencies selected for the radar burst included several frequencies within the DFS Detection Bandwidth and frequencies near the edge of the bandwidth.
For Short Pulse Radar types, an observation of the EUT's transmission was made for duration greater than 10 seconds after the burst to ensure detection occurred.
For Long Pulse Radar types, an observation of the EUT's transmission was made for duration greater than 10 seconds after the burst to ensure detection occurred. Also, center frequencies for the 30 trials were randomly selected within 80% of the Occupied Bandwidth.
Once the performance check was completed, statistical data was gathered as to determine the ability of the EUT to detect radar waveforms. An aggregate total for the Short Pulse Radar detections was calculated.

Test Results: The EUT was compliant with the requirements of this section.

Test Engineer(s): Jun Qi

Test Date(s): 11/11/16

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
0	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	30	18	1	1428	1
	Detection Percentage				100% (> 60%)
EUT Test Frequency					5490 - 5510 MHz
Radar Frequency					5490 - 5510 MHz

Table 26. Statistical Performance Check, Radar Type 0, 11n, 20MHz BW, 5500 MHz

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
1	1	57	1	938	1
	2	76	1	698	1
	3	86	1	618	1
	4	99	1	538	1
	5	61	1	878	1
	6	18	1	3066	1
	7	83	1	638	1
	8	58	1	918	1
	9	63	1	838	1
	10	62	1	858	1
	11	67	1	798	1
	12	74	1	718	1
	13	92	1	578	1
	14	89	1	598	1
	15	95	1	558	1
	16	21	1	2536	1
	17	55	1	966	1
	18	64	1	827	1
	19	22	1	2501	1
	20	21	1	2595	1
	21	48	1	1114	1
	22	41	1	1302	1
	23	18	1	3045	1
	24	33	1	1624	1
	25	19	1	2878	1
	26	52	1	1027	1
	27	22	1	2485	1
	28	33	1	1600	1
	29	46	1	1172	1
	30	45	1	1177	1
	Detection Percentage				100% (> 60%)
EUT Test Frequency					5490 - 5510 MHz
Radar Frequency					5490 - 5510 MHz

Table 27. Statistical Performance Check, Radar Type 1, 11n, 20MHz BW, 5500 MHz

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Radar Type	Trial #	Pulse Width 1 to 5 µsec	PRI 150 to 230 µsec	Pulses per Burst 23 to 29	Detection 1 = Yes, 0 = No
2	1	3.2	179	26	1
	2	1.1	207	23	1
	3	2.1	230	24	1
	4	4.8	200	29	1
	5	3.9	214	28	1
	6	2.9	222	26	1
	7	3.2	204	26	1
	8	2.5	192	25	1
	9	3.1	164	26	1
	10	1.2	156	23	1
	11	3.9	210	27	1
	12	4.6	201	29	1
	13	3.2	162	26	1
	14	2.2	197	25	1
	15	4.5	163	29	1
	16	3	203	26	1
	17	5	168	29	1
	18	2.4	217	25	1
	19	2.9	191	26	1
	20	2.3	166	25	1
	21	3.7	150	27	1
	22	2.2	176	25	1
	23	4.9	195	29	1
	24	2.9	202	26	1
	25	2.5	178	25	1
	26	1.1	206	23	1
	27	3.8	155	27	1
	28	4.7	157	29	1
	29	2.4	224	25	1
	30	4.2	159	28	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5490 - 5510 MHz**
Radar Frequency					**5490 - 5510 MHz**

Table 28. Statistical Performance Check, Radar Type 2, 11n, 20MHz BW, 5500 MHz

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Radar Type	Trial #	Pulse Width 6 to 10 µsec	PRI 200 to 500 µsec	Pulses per Burst 16 to 18	Detection 1 = Yes, 0 = No
3	1	8.2	355	17	1
	2	6.1	487	16	1
	3	7.1	344	16	1
	4	9.8	288	18	1
	5	8.9	230	18	1
	6	7.9	432	17	1
	7	8.2	207	17	1
	8	7.5	443	17	1
	9	8.1	439	17	1
	10	6.2	223	16	1
	11	8.9	208	18	1
	12	9.6	463	18	1
	13	8.2	441	17	1
	14	7.2	323	16	1
	15	9.5	297	18	1
	16	8	412	17	1
	17	10	324	18	1
	18	7.4	271	17	1
	19	7.9	349	17	1
	20	7.3	409	16	1
	21	8.7	373	18	1
	22	7.2	254	16	1
	23	9.9	274	18	1
	24	7.9	278	17	1
	25	7.5	317	17	1
	26	6.1	260	16	1
	27	8.8	211	18	1
	28	9.7	272	18	1
	29	7.4	264	17	1
	30	9.2	284	18	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5490 - 5510 MHz**
Radar Frequency					**5490 - 5510 MHz**

Table 29. Statistical Performance Check, Radar Type 3, 11n, 20MHz BW, 5500 MHz

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Radar Type	Trial #	Pulse Width 11 to 20 µsec	PRI 200 to 500 µsec	Pulses per Burst 12 to 16	Detection 1 = Yes, 0 = No
4	1	16	355	14	1
	2	11.3	487	12	1
	3	13.5	344	13	1
	4	19.4	288	16	1
	5	17.5	230	15	1
	6	15.3	432	14	1
	7	15.9	207	14	1
	8	14.3	443	13	1
	9	15.8	439	14	1
	10	11.5	223	12	1
	11	17.4	208	15	1
	12	19	463	16	1
	13	16	441	14	1
	14	13.8	323	13	1
	15	18.9	297	16	1
	16	15.5	412	14	1
	17	19.9	324	16	1
	18	14.1	271	13	1
	19	15.2	349	14	1
	20	13.8	409	13	1
	21	17.1	373	15	1
	22	13.8	254	13	1
	23	19.8	274	16	1
	24	15.3	278	14	1
	25	14.5	317	13	1
	26	11.3	260	12	1
	27	17.3	211	15	1
	28	19.2	272	16	1
	29	14.2	264	13	1
	30	18.2	284	15	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5490 - 5510 MHz**
Radar Frequency					**5490 - 5510 MHz**

Table 30. Statistical Performance Check, Radar Type 4, 11n, 20MHz BW, 5500 MHz

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Radar Type	Trial #	Frequency (MHz)	Filename*	Detection
				1 = Yes, 0 = No
5	1	5500	bin5-trial 1	1
	2	5500	bin5-trial 2	1
	3	5500	bin5-trial 3	1
	4	5500	bin5-trial 4	1
	5	5500	bin5-trial 5	1
	6	5500	bin5-trial 6	1
	7	5500	bin5-trial 7	1
	8	5500	bin5-trial 8	1
	9	5500	bin5-trial 9	1
	10	5500	bin5-trial 10	1
	11	5492.4	bin5-trial 11	1
	12	5496.8	bin5-trial 12	1
	13	5495.2	bin5-trial 13	1
	14	5496.4	bin5-trial 14	1
	15	5495.6	bin5-trial 15	1
	16	5493.6	bin5-trial 16	1
	17	5496	bin5-trial 17	1
	18	5494.8	bin5-trial 18	1
	19	5492.8	bin5-trial 19	1
	20	5497.2	bin5-trial 20	1
	21	5502	bin5-trial 21	1
	22	5507.6	bin5-trial 22	1
	23	5505.6	bin5-trial 23	1
	24	5502.4	bin5-trial 24	1
	25	5507.2	bin5-trial 25	1
	26	5508	bin5-trial 26	1
	27	5503.6	bin5-trial 27	1
	28	5503.2	bin5-trial 28	1
	29	5506.8	bin5-trial 29	1
	30	5506	bin5-trial 30	1
	Detection Percentage			**100% (> 80%)**

Table 31. Statistical Performance Check, Radar Type 5, 11n, 20MHz BW, 5500 MHz

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Radar Type	Trial #	Pulses/Hop	Pulse Width (µsec)	PRI (µsec)	Detection 1 = Yes, 0 = No
6	1	9	1	333	1
	2	9	1	333	1
	3	9	1	333	1
	4	9	1	333	1
	5	9	1	333	1
	6	9	1	333	1
	7	9	1	333	1
	8	9	1	333	1
	9	9	1	333	1
	10	9	1	333	1
	11	9	1	333	1
	12	9	1	333	1
	13	9	1	333	1
	14	9	1	333	1
	15	9	1	333	1
	16	9	1	333	1
	17	9	1	333	1
	18	9	1	333	1
	19	9	1	333	1
	20	9	1	333	1
	21	9	1	333	1
	22	9	1	333	1
	23	9	1	333	1
	24	9	1	333	1
	25	9	1	333	1
	26	9	1	333	1
	27	9	1	333	1
	28	9	1	333	1
	29	9	1	333	1
	30	9	1	333	1
	Detection Percentage				**100% (> 70%)**
EUT Test Frequency					**5490 - 5510 MHz**

Table 32. Statistical Performance Check, Radar Type 6, 11n, 20MHz BW, 5500 MHz

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
0	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	30	18	1	1428	1
	Detection Percentage				100% (> 60%)
EUT Test Frequency					5490 - 5529 MHz
Radar Frequency					5490 - 5529 MHz

Table 33. Statistical Performance Check, Radar Type 0, 11n, 40MHz BW, 5510 MHz

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
1	1	57	1	938	1
	2	76	1	698	1
	3	86	1	618	1
	4	99	1	538	1
	5	61	1	878	1
	6	18	1	3066	1
	7	83	1	638	1
	8	58	1	918	1
	9	63	1	838	1
	10	62	1	858	1
	11	67	1	798	1
	12	74	1	718	1
	13	92	1	578	1
	14	89	1	598	1
	15	95	1	558	1
	16	21	1	2536	1
	17	55	1	966	1
	18	64	1	827	1
	19	22	1	2501	1
	20	21	1	2595	1
	21	48	1	1114	1
	22	41	1	1302	1
	23	18	1	3045	1
	24	33	1	1624	1
	25	19	1	2878	1
	26	52	1	1027	1
	27	22	1	2485	1
	28	33	1	1600	1
	29	46	1	1172	1
	30	45	1	1177	1
	Detection Percentage				100% (> 60%)
EUT Test Frequency					5490 - 5529 MHz
Radar Frequency					5490 - 5529 MHz

Table 34. Statistical Performance Check, Radar Type 1, 11n, 40MHz BW, 5510 MHz

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Radar Type	Trial #	Pulse Width 1 to 5 µsec	PRI 150 to 230 µsec	Pulses per Burst 23 to 29	Detection 1 = Yes, 0 = No
2	1	3.2	179	26	1
	2	1.1	207	23	1
	3	2.1	230	24	1
	4	4.8	200	29	1
	5	3.9	214	28	1
	6	2.9	222	26	1
	7	3.2	204	26	1
	8	2.5	192	25	1
	9	3.1	164	26	1
	10	1.2	156	23	1
	11	3.9	210	27	1
	12	4.6	201	29	1
	13	3.2	162	26	1
	14	2.2	197	25	1
	15	4.5	163	29	1
	16	3	203	26	1
	17	5	168	29	1
	18	2.4	217	25	1
	19	2.9	191	26	1
	20	2.3	166	25	1
	21	3.7	150	27	1
	22	2.2	176	25	1
	23	4.9	195	29	1
	24	2.9	202	26	1
	25	2.5	178	25	1
	26	1.1	206	23	1
	27	3.8	155	27	1
	28	4.7	157	29	1
	29	2.4	224	25	1
	30	4.2	159	28	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5490 - 5529 MHz**
Radar Frequency					**5490 - 5529 MHz**

Table 35. Statistical Performance Check, Radar Type 2, 11n, 40MHz BW, 5510 MHz

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Radar Type	Trial #	Pulse Width 6 to 10 µsec	PRI 200 to 500 µsec	Pulses per Burst 16 to 18	Detection 1 = Yes, 0 = No
3	1	8.2	355	17	1
	2	6.1	487	16	1
	3	7.1	344	16	1
	4	9.8	288	18	1
	5	8.9	230	18	1
	6	7.9	432	17	1
	7	8.2	207	17	1
	8	7.5	443	17	1
	9	8.1	439	17	1
	10	6.2	223	16	1
	11	8.9	208	18	1
	12	9.6	463	18	1
	13	8.2	441	17	1
	14	7.2	323	16	1
	15	9.5	297	18	1
	16	8	412	17	1
	17	10	324	18	1
	18	7.4	271	17	1
	19	7.9	349	17	1
	20	7.3	409	16	1
	21	8.7	373	18	1
	22	7.2	254	16	1
	23	9.9	274	18	1
	24	7.9	278	17	1
	25	7.5	317	17	1
	26	6.1	260	16	1
	27	8.8	211	18	1
	28	9.7	272	18	1
	29	7.4	264	17	1
	30	9.2	284	18	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5490 - 5529 MHz**
Radar Frequency					**5490 - 5529 MHz**

Table 36. Statistical Performance Check, Radar Type 3, 11n, 40MHz BW, 5510 MHz

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Radar Type	Trial #	Pulse Width 11 to 20 µsec	PRI 200 to 500 µsec	Pulses per Burst 12 to 16	Detection 1 = Yes, 0 = No
4	1	16	355	14	1
	2	11.3	487	12	1
	3	13.5	344	13	1
	4	19.4	288	16	1
	5	17.5	230	15	1
	6	15.3	432	14	1
	7	15.9	207	14	1
	8	14.3	443	13	1
	9	15.8	439	14	1
	10	11.5	223	12	1
	11	17.4	208	15	1
	12	19	463	16	1
	13	16	441	14	1
	14	13.8	323	13	1
	15	18.9	297	16	1
	16	15.5	412	14	1
	17	19.9	324	16	1
	18	14.1	271	13	1
	19	15.2	349	14	1
	20	13.8	409	13	1
	21	17.1	373	15	1
	22	13.8	254	13	1
	23	19.8	274	16	1
	24	15.3	278	14	1
	25	14.5	317	13	1
	26	11.3	260	12	1
	27	17.3	211	15	1
	28	19.2	272	16	1
	29	14.2	264	13	1
	30	18.2	284	15	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5490 - 5529 MHz**
Radar Frequency					**5490 - 5529 MHz**

Table 37. Statistical Performance Check, Radar Type 4, 11n, 40MHz BW, 5510 MHz

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Radar Type	Trial #	Frequency (MHz)	Filename*	Detection
				1 = Yes, 0 = No
5	1	5510	bin5-trial 1	1
	2	5510	bin5-trial 2	1
	3	5510	bin5-trial 3	1
	4	5510	bin5-trial 4	1
	5	5510	bin5-trial 5	1
	6	5510	bin5-trial 6	1
	7	5510	bin5-trial 7	1
	8	5510	bin5-trial 8	1
	9	5510	bin5-trial 9	1
	10	5510	bin5-trial 10	1
	11	5492.4	bin5-trial 11	1
	12	5496.8	bin5-trial 12	1
	13	5495.2	bin5-trial 13	1
	14	5496.4	bin5-trial 14	1
	15	5495.6	bin5-trial 15	1
	16	5493.6	bin5-trial 16	1
	17	5496	bin5-trial 17	1
	18	5494.8	bin5-trial 18	1
	19	5492.8	bin5-trial 19	1
	20	5497.2	bin5-trial 20	1
	21	5522	bin5-trial 21	1
	22	5527.6	bin5-trial 22	1
	23	5525.6	bin5-trial 23	1
	24	5522.4	bin5-trial 24	1
	25	5527.2	bin5-trial 25	1
	26	5528	bin5-trial 26	1
	27	5523.6	bin5-trial 27	1
	28	5523.2	bin5-trial 28	1
	29	5526.8	bin5-trial 29	1
	30	5526	bin5-trial 30	1
	Detection Percentage			**100% (> 80%)**

Table 38. Statistical Performance Check, Radar Type 5, 11n, 40MHz BW, 5510 MHz

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Radar Type	Trial #	Pulses/Hop	Pulse Width (µsec)	PRI (µsec)	Detection 1 = Yes, 0 = No
6	1	9	1	333	1
	2	9	1	333	1
	3	9	1	333	1
	4	9	1	333	1
	5	9	1	333	1
	6	9	1	333	1
	7	9	1	333	1
	8	9	1	333	1
	9	9	1	333	1
	10	9	1	333	1
	11	9	1	333	1
	12	9	1	333	1
	13	9	1	333	1
	14	9	1	333	1
	15	9	1	333	1
	16	9	1	333	1
	17	9	1	333	1
	18	9	1	333	1
	19	9	1	333	1
	20	9	1	333	1
	21	9	1	333	1
	22	9	1	333	1
	23	9	1	333	1
	24	9	1	333	1
	25	9	1	333	1
	26	9	1	333	1
	27	9	1	333	1
	28	9	1	333	1
	29	9	1	333	1
	30	9	1	333	1
	Detection Percentage				**100% (> 70%)**
EUT Test Frequency					**5490 - 5529 MHz**

Table 39. Statistical Performance Check, Radar Type 6, 11n, 40MHz BW, 5510 MHz

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
0	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	30	18	1	1428	1
	Detection Percentage				100% (> 60%)
EUT Test Frequency					5491 - 5569 MHz
Radar Frequency					5491 - 5569 MHz

Table 40. Statistical Performance Check, Radar Type 0, 11ac, 80MHz BW, 5530 MHz

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
1	1	57	1	938	1
	2	76	1	698	1
	3	86	1	618	1
	4	99	1	538	1
	5	61	1	878	1
	6	18	1	3066	1
	7	83	1	638	1
	8	58	1	918	1
	9	63	1	838	1
	10	62	1	858	1
	11	67	1	798	1
	12	74	1	718	1
	13	92	1	578	1
	14	89	1	598	1
	15	95	1	558	1
	16	21	1	2536	1
	17	55	1	966	1
	18	64	1	827	1
	19	22	1	2501	1
	20	21	1	2595	1
	21	48	1	1114	1
	22	41	1	1302	1
	23	18	1	3045	1
	24	33	1	1624	1
	25	19	1	2878	1
	26	52	1	1027	1
	27	22	1	2485	1
	28	33	1	1600	1
	29	46	1	1172	1
	30	45	1	1177	1
	Detection Percentage				100% (> 60%)
EUT Test Frequency					5491 - 5569 MHz
Radar Frequency					5491 - 5569 MHz

Table 41. Statistical Performance Check, Radar Type 1, 11ac, 80MHz BW, 5530 MHz

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Radar Type	Trial #	Pulse Width 1 to 5 µsec	PRI 150 to 230 µsec	Pulses per Burst 23 to 29	Detection 1 = Yes, 0 = No
2	1	3.2	179	26	1
	2	1.1	207	23	1
	3	2.1	230	24	1
	4	4.8	200	29	1
	5	3.9	214	28	1
	6	2.9	222	26	1
	7	3.2	204	26	1
	8	2.5	192	25	1
	9	3.1	164	26	1
	10	1.2	156	23	1
	11	3.9	210	27	1
	12	4.6	201	29	1
	13	3.2	162	26	1
	14	2.2	197	25	1
	15	4.5	163	29	1
	16	3	203	26	1
	17	5	168	29	1
	18	2.4	217	25	1
	19	2.9	191	26	1
	20	2.3	166	25	1
	21	3.7	150	27	1
	22	2.2	176	25	1
	23	4.9	195	29	1
	24	2.9	202	26	1
	25	2.5	178	25	1
	26	1.1	206	23	1
	27	3.8	155	27	1
	28	4.7	157	29	1
	29	2.4	224	25	1
	30	4.2	159	28	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5491 - 5569 MHz**
Radar Frequency					**5491 - 5569 MHz**

Table 42. Statistical Performance Check, Radar Type 2, 11ac, 80MHz BW, 5530 MHz

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Radar Type	Trial #	Pulse Width 6 to 10 µsec	PRI 200 to 500 µsec	Pulses per Burst 16 to 18	Detection 1 = Yes, 0 = No
3	1	8.2	355	17	1
	2	6.1	487	16	1
	3	7.1	344	16	1
	4	9.8	288	18	1
	5	8.9	230	18	1
	6	7.9	432	17	1
	7	8.2	207	17	1
	8	7.5	443	17	1
	9	8.1	439	17	1
	10	6.2	223	16	1
	11	8.9	208	18	1
	12	9.6	463	18	1
	13	8.2	441	17	1
	14	7.2	323	16	1
	15	9.5	297	18	1
	16	8	412	17	1
	17	10	324	18	1
	18	7.4	271	17	1
	19	7.9	349	17	1
	20	7.3	409	16	1
	21	8.7	373	18	1
	22	7.2	254	16	1
	23	9.9	274	18	1
	24	7.9	278	17	1
	25	7.5	317	17	1
	26	6.1	260	16	1
	27	8.8	211	18	1
	28	9.7	272	18	1
	29	7.4	264	17	1
	30	9.2	284	18	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5491 - 5569 MHz**
Radar Frequency					**5491 - 5569 MHz**

Table 43. Statistical Performance Check, Radar Type 3, 11ac, 80MHz BW, 5530 MHz

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Radar Type	Trial #	Pulse Width 11 to 20 µsec	PRI 200 to 500 µsec	Pulses per Burst 12 to 16	Detection 1 = Yes, 0 = No
4	1	16	355	14	1
	2	11.3	487	12	1
	3	13.5	344	13	1
	4	19.4	288	16	1
	5	17.5	230	15	1
	6	15.3	432	14	1
	7	15.9	207	14	1
	8	14.3	443	13	1
	9	15.8	439	14	1
	10	11.5	223	12	1
	11	17.4	208	15	1
	12	19	463	16	1
	13	16	441	14	1
	14	13.8	323	13	1
	15	18.9	297	16	1
	16	15.5	412	14	1
	17	19.9	324	16	1
	18	14.1	271	13	1
	19	15.2	349	14	1
	20	13.8	409	13	1
	21	17.1	373	15	1
	22	13.8	254	13	1
	23	19.8	274	16	1
	24	15.3	278	14	1
	25	14.5	317	13	1
	26	11.3	260	12	1
	27	17.3	211	15	1
	28	19.2	272	16	1
	29	14.2	264	13	1
	30	18.2	284	15	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5491 - 5569 MHz**
Radar Frequency					**5491 - 5569 MHz**

Table 44. Statistical Performance Check, Radar Type 4, 11ac, 80MHz BW, 5530 MHz

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Radar Type	Trial #	Frequency (MHz)	Filename*	Detection
				1 = Yes, 0 = No
5	1	5530	bin5-trial 1	1
	2	5530	bin5-trial 2	1
	3	5530	bin5-trial 3	1
	4	5530	bin5-trial 4	1
	5	5530	bin5-trial 5	1
	6	5530	bin5-trial 6	1
	7	5530	bin5-trial 7	1
	8	5530	bin5-trial 8	1
	9	5530	bin5-trial 9	1
	10	5530	bin5-trial 10	1
	11	5492.4	bin5-trial 11	1
	12	5496.8	bin5-trial 12	1
	13	5495.2	bin5-trial 13	1
	14	5496.4	bin5-trial 14	1
	15	5495.6	bin5-trial 15	1
	16	5493.6	bin5-trial 16	1
	17	5496	bin5-trial 17	1
	18	5494.8	bin5-trial 18	1
	19	5492.8	bin5-trial 19	1
	20	5497.2	bin5-trial 20	1
	21	5562	bin5-trial 21	1
	22	5567.6	bin5-trial 22	1
	23	5565.6	bin5-trial 23	1
	24	5562.4	bin5-trial 24	1
	25	5567.2	bin5-trial 25	1
	26	5568	bin5-trial 26	1
	27	5563.6	bin5-trial 27	1
	28	5563.2	bin5-trial 28	1
	29	5566.8	bin5-trial 29	1
	30	5566	bin5-trial 30	1
	Detection Percentage			**100% (> 80%)**

Table 45. Statistical Performance Check, Radar Type 5, 11ac, 80MHz BW, 5530 MHz

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Radar Type	Trial #	Pulses/Hop	Pulse Width (µsec)	PRI (µsec)	Detection 1 = Yes, 0 = No
6	1	9	1	333	1
	2	9	1	333	1
	3	9	1	333	1
	4	9	1	333	1
	5	9	1	333	1
	6	9	1	333	1
	7	9	1	333	1
	8	9	1	333	1
	9	9	1	333	1
	10	9	1	333	1
	11	9	1	333	1
	12	9	1	333	1
	13	9	1	333	1
	14	9	1	333	1
	15	9	1	333	1
	16	9	1	333	1
	17	9	1	333	1
	18	9	1	333	1
	19	9	1	333	1
	20	9	1	333	1
	21	9	1	333	1
	22	9	1	333	1
	23	9	1	333	1
	24	9	1	333	1
	25	9	1	333	1
	26	9	1	333	1
	27	9	1	333	1
	28	9	1	333	1
	29	9	1	333	1
	30	9	1	333	1
	Detection Percentage				100% (> 70%)
EUT Test Frequency					5491 - 5569 MHz

Table 46. Statistical Performance Check, Radar Type 6, 11ac, 80MHz BW, 5530 MHz

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
0	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	30	18	1	1428	1
	Detection Percentage				100% (> 60%)
EUT Test Frequency					5491 - 5650 MHz
Radar Frequency					5491 - 5650 MHz

Table 47. Statistical Performance Check, Radar Type 0, 11ac, 160MHz BW, 5570 MHz

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Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
1	1	57	1	938	1
	2	76	1	698	1
	3	86	1	618	1
	4	99	1	538	1
	5	61	1	878	1
	6	18	1	3066	1
	7	83	1	638	1
	8	58	1	918	1
	9	63	1	838	1
	10	62	1	858	1
	11	67	1	798	1
	12	74	1	718	1
	13	92	1	578	1
	14	89	1	598	1
	15	95	1	558	1
	16	21	1	2536	1
	17	55	1	966	1
	18	64	1	827	1
	19	22	1	2501	1
	20	21	1	2595	1
	21	48	1	1114	1
	22	41	1	1302	1
	23	18	1	3045	1
	24	33	1	1624	1
	25	19	1	2878	1
	26	52	1	1027	1
	27	22	1	2485	1
	28	33	1	1600	1
	29	46	1	1172	1
	30	45	1	1177	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5491 - 5650 MHz**
Radar Frequency					**5491 - 5650 MHz**

Table 48. Statistical Performance Check, Radar Type 1, 11ac, 160MHz BW, 5570 MHz

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Radar Type	Trial #	Pulse Width 1 to 5 µsec	PRI 150 to 230 µsec	Pulses per Burst 23 to 29	Detection 1 = Yes, 0 = No
2	1	3.2	179	26	1
	2	1.1	207	23	1
	3	2.1	230	24	1
	4	4.8	200	29	1
	5	3.9	214	28	1
	6	2.9	222	26	1
	7	3.2	204	26	1
	8	2.5	192	25	1
	9	3.1	164	26	1
	10	1.2	156	23	1
	11	3.9	210	27	1
	12	4.6	201	29	1
	13	3.2	162	26	1
	14	2.2	197	25	1
	15	4.5	163	29	1
	16	3	203	26	1
	17	5	168	29	1
	18	2.4	217	25	1
	19	2.9	191	26	1
	20	2.3	166	25	1
	21	3.7	150	27	1
	22	2.2	176	25	1
	23	4.9	195	29	1
	24	2.9	202	26	1
	25	2.5	178	25	1
	26	1.1	206	23	1
	27	3.8	155	27	1
	28	4.7	157	29	1
	29	2.4	224	25	1
	30	4.2	159	28	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5491 - 5650 MHz**
Radar Frequency					**5491 - 5650 MHz**

Table 49. Statistical Performance Check, Radar Type 2, 11ac, 160MHz BW, 5570 MHz

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Radar Type	Trial #	Pulse Width 6 to 10 µsec	PRI 200 to 500 µsec	Pulses per Burst 16 to 18	Detection 1 = Yes, 0 = No
3	1	8.2	355	17	1
	2	6.1	487	16	1
	3	7.1	344	16	1
	4	9.8	288	18	1
	5	8.9	230	18	1
	6	7.9	432	17	1
	7	8.2	207	17	1
	8	7.5	443	17	1
	9	8.1	439	17	1
	10	6.2	223	16	1
	11	8.9	208	18	1
	12	9.6	463	18	1
	13	8.2	441	17	1
	14	7.2	323	16	1
	15	9.5	297	18	1
	16	8	412	17	1
	17	10	324	18	1
	18	7.4	271	17	1
	19	7.9	349	17	1
	20	7.3	409	16	1
	21	8.7	373	18	1
	22	7.2	254	16	1
	23	9.9	274	18	1
	24	7.9	278	17	1
	25	7.5	317	17	1
	26	6.1	260	16	1
	27	8.8	211	18	1
	28	9.7	272	18	1
	29	7.4	264	17	1
	30	9.2	284	18	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5491 - 5650 MHz**
Radar Frequency					**5491 - 5650 MHz**

Table 50. Statistical Performance Check, Radar Type 3, 11ac, 160MHz BW, 5570 MHz

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Radar Type	Trial #	Pulse Width 11 to 20 µsec	PRI 200 to 500 µsec	Pulses per Burst 12 to 16	Detection 1 = Yes, 0 = No
4	1	16	355	14	1
	2	11.3	487	12	1
	3	13.5	344	13	1
	4	19.4	288	16	1
	5	17.5	230	15	1
	6	15.3	432	14	1
	7	15.9	207	14	1
	8	14.3	443	13	1
	9	15.8	439	14	1
	10	11.5	223	12	1
	11	17.4	208	15	1
	12	19	463	16	1
	13	16	441	14	1
	14	13.8	323	13	1
	15	18.9	297	16	1
	16	15.5	412	14	1
	17	19.9	324	16	1
	18	14.1	271	13	1
	19	15.2	349	14	1
	20	13.8	409	13	1
	21	17.1	373	15	1
	22	13.8	254	13	1
	23	19.8	274	16	1
	24	15.3	278	14	1
	25	14.5	317	13	1
	26	11.3	260	12	1
	27	17.3	211	15	1
	28	19.2	272	16	1
	29	14.2	264	13	1
	30	18.2	284	15	1
	Detection Percentage				**100% (> 60%)**
EUT Test Frequency					**5491 - 5650 MHz**
Radar Frequency					**5491 - 5650 MHz**

Table 51. Statistical Performance Check, Radar Type 4, 11ac, 160MHz BW, 5570 MHz

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Radar Type	Trial #	Frequency (MHz)	Filename*	Detection
				1 = Yes, 0 = No
5	1	5570	bin5-trial 1	1
	2	5570	bin5-trial 2	1
	3	5570	bin5-trial 3	1
	4	5570	bin5-trial 4	1
	5	5570	bin5-trial 5	1
	6	5570	bin5-trial 6	1
	7	5570	bin5-trial 7	1
	8	5570	bin5-trial 8	1
	9	5570	bin5-trial 9	1
	10	5570	bin5-trial 10	1
	11	5492.4	bin5-trial 11	1
	12	5496.8	bin5-trial 12	1
	13	5495.2	bin5-trial 13	1
	14	5496.4	bin5-trial 14	1
	15	5495.6	bin5-trial 15	1
	16	5493.6	bin5-trial 16	1
	17	5496	bin5-trial 17	1
	18	5494.8	bin5-trial 18	1
	19	5492.8	bin5-trial 19	1
	20	5497.2	bin5-trial 20	1
	21	5642	bin5-trial 21	1
	22	5647.6	bin5-trial 22	1
	23	5645.6	bin5-trial 23	1
	24	5642.4	bin5-trial 24	1
	25	5647.2	bin5-trial 25	1
	26	5648	bin5-trial 26	1
	27	5643.6	bin5-trial 27	1
	28	5643.2	bin5-trial 28	1
	29	5646.8	bin5-trial 29	1
	30	5646	bin5-trial 30	1
	Detection Percentage			**100% (> 80%)**

Table 52. Statistical Performance Check, Radar Type 5, 11ac, 160MHz BW, 5570 MHz

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Radar Type	Trial #	Pulses/Hop	Pulse Width (µsec)	PRI (µsec)	Detection 1 = Yes, 0 = No
6	1	9	1	333	1
	2	9	1	333	1
	3	9	1	333	1
	4	9	1	333	1
	5	9	1	333	1
	6	9	1	333	1
	7	9	1	333	1
	8	9	1	333	1
	9	9	1	333	1
	10	9	1	333	1
	11	9	1	333	1
	12	9	1	333	1
	13	9	1	333	1
	14	9	1	333	1
	15	9	1	333	1
	16	9	1	333	1
	17	9	1	333	1
	18	9	1	333	1
	19	9	1	333	1
	20	9	1	333	1
	21	9	1	333	1
	22	9	1	333	1
	23	9	1	333	1
	24	9	1	333	1
	25	9	1	333	1
	26	9	1	333	1
	27	9	1	333	1
	28	9	1	333	1
	29	9	1	333	1
	30	9	1	333	1
	Detection Percentage				100% (> 70%)
EUT Test Frequency					5491 - 5650 MHz

Table 53. Statistical Performance Check, Radar Type 6, 11ac, 160MHz BW, 5570 MHz

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VI. Test Equipment

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Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2005.

Asset	Equipment	Manufacturer	Model	Calibration Date	Calibration Due Date
1U0258	SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	E4407B	2/2/2016	2/2/2017
1S3905	VECTOR SIGNAL GENERATOR	KEYSIGHT TECHNOLOGIES	N5172B	3/30/2015	3/30/2017
1S2603	DOUBLE RIDGED WAVEGUIDE HORN	ETS-LINDGREN	3117	5/11/2015	5/11/2017
1S3949	HORN ANTENNA	A.H SYSTEMS, INC	SAS-590-12	SEE NOTE	
1S2746	BILOG ANTENNA	SUNOL SCIENCE	JB3	10/19/2016	10/19/2018
1S2482	5 METER CHAMBER (NSA)	PANASHIELD	5 METER SEMI-ANECHOIC CHAMBER	5/12/2015	11/12/2017
1S2121	PREAMPLIFIER	HEWLETT PACKARD	08449B H02	SEE NOTE	
1S3835	PSA SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	E4448A	4/11/2016	4/11/2017

Table 54. Test Equipment List

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.

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VII. Certification & User's Manual Information

Certification & User's Manual Information

L. Certification Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart I — Marketing of Radio frequency devices:

§ 2.801 Radio-frequency device defined.

As used in this part, a radio-frequency device is any device which in its operation is capable of Emitting radio-frequency energy by radiation, conduction, or other means. Radio- frequency devices include, but are not limited to:

(a) The various types of radio communication transmitting devices described throughout this chapter.

(b) The incidental, unintentional and intentional radiators defined in Part 15 of this chapter.

(c) The industrial, scientific, and medical equipment described in Part 18 of this chapter.

(d) Any part or component thereof which in use emits radio-frequency energy by radiation, conduction, or other means.

§ 2.803 Marketing of radio frequency devices prior to equipment authorization.

(a) Except as provided elsewhere in this chapter, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship or distribute for the purpose of selling or leasing or offering for sale or lease, any radio frequency device unless:

(1) In the case of a device subject to certification, such device has been authorized by the Commission in accordance with the rules in this chapter and is properly identified and labeled as required by §2.925 and other relevant sections in this chapter; or

(2) In the case of a device that is not required to have a grant of equipment authorization issued by the Commission, but which must comply with the specified technical standards prior to use, such device also complies with all applicable administrative (including verification of the equipment or authorization under a Declaration of Conformity, where required), technical, labeling and identification requirements specified in this chapter.

(d) Notwithstanding the provisions of paragraph (a) of this section, the offer for sale solely to business, commercial, industrial, scientific or medical users (but not an offer for sale to other parties or to end users located in a residential environment) of a radio frequency device that is in the conceptual, developmental, design or pre-production stage is permitted prior to equipment authorization or, for devices not subject to the equipment authorization requirements, prior to a determination of compliance with the applicable technical requirements *provided* that the prospective buyer is advised in writing at the time of the offer for sale that the equipment is subject to the FCC rules and that the equipment will comply with the appropriate rules before delivery to the buyer or to centers of distribution.

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(e)(1) Notwithstanding the provisions of paragraph (a) of this section, prior to equipment authorization or determination of compliance with the applicable technical requirements any radio frequency device may be operated, but not marketed, for the following purposes and under the following conditions:

(i) Compliance testing;

(ii) Demonstrations at a trade show provided the notice contained in paragraph (c) of this section is displayed in a conspicuous location on, or immediately adjacent to, the device;

(iii) Demonstrations at an exhibition conducted at a business, commercial, industrial, scientific or medical location, but excluding locations in a residential environment, provided the notice contained in paragraphs (c) or (d) of this section, as appropriate, is displayed in a conspicuous location on, or immediately adjacent to, the device;

(iv) Evaluation of product performance and determination of customer acceptability, provided such operation takes place at the manufacturer's facilities during developmental, design or pre-production states; or

(v) Evaluation of product performance and determination of customer acceptability where customer acceptability of a radio frequency device cannot be determined at the manufacturer's facilities because of size or unique capability of the device, provided the device is operated at a business, commercial, industrial, scientific or medical user's site, but not at a residential site, during the development, design or pre-production stages.

(e)(2) For the purpose of paragraphs (e)(1)(iv) and (e)(1)(v) of this section, the term *manufacturer's facilities* includes the facilities of the party responsible for compliance with the regulations and the manufacturer's premises, as well as the facilities of other entities working under the authorization of the responsible party in connection with the development and manufacture, but not the marketing, of the equipment.

(f) For radio frequency devices subject to verification and sold solely to business, commercial, industrial, scientific and medical users (excluding products sold to other parties or for operation in a residential environment), parties responsible for verification of the devices shall have the option of ensuring compliance with the applicable technical specifications of this chapter at each end user's location after installation, provided that the purchase or lease agreement includes a proviso that such a determination of compliance be made and is the responsibility of the party responsible for verification of the equipment.

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Certification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart J — Equipment Authorization Procedures:

§ 2.901 Basis and Purpose

(a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated.[1] *In addition to the technical standards provided, the rules governing the service may require that such equipment be verified by the manufacturer or importer*, be authorized under a Declaration of Conformity, or receive an equipment authorization from the Commission by one of the following procedures: certification or registration.

(b) The following sections describe the verification procedure, the procedure for a Declaration of Conformity, and the procedures to be followed in obtaining certification from the Commission and the conditions attendant to such a grant.

§ 2.907 Certification.

(a) Certification is an equipment authorization issued by the Commission, based on representation and test data submitted by the applicant.

(b) Certification attaches to all units subsequently marketed by the grantee which are identical (see Section 2.908) to the sample tested except for permissive changes or other variations authorized by the Commission pursuant to Section 2.1043.

[1] In this case, the equipment is subject to the rules of Part 15. More specifically, the equipment falls under Subpart B (of Part 15), which deals with unintentional radiators.

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Certification & User's Manual Information

§ 2.948 Description of measurement facilities.

(a) Each party making measurements of equipment that is subject to an equipment authorization under Part 15 or Part 18 of this chapter, regardless of whether the measurements are filed with the Commission or kept on file by the party responsible for compliance of equipment marketed within the U.S. or its possessions, shall compile a description of the measurement facilities employed.

(1) If the measured equipment is subject to the verification procedure, the description of the measurement facilities shall be retained by the party responsible for verification of the equipment.

(i) If the equipment is verified through measurements performed by an independent laboratory, it is acceptable for the party responsible for verification of the equipment to rely upon the description of the measurement facilities retained by or placed on file with the Commission by that laboratory. In this situation, the party responsible for the verification of the equipment is not required to retain a duplicate copy of the description of the measurement facilities.

(ii) If the equipment is verified based on measurements performed at the installation site of the equipment, no specific site calibration data is required. It is acceptable to retain the description of the measurement facilities at the site at which the measurements were performed.

(2) If the equipment is to be authorized by the Commission under the certification procedure, the description of the measurement facilities shall be filed with the Commission's Laboratory in Columbia, Maryland. The data describing the measurement facilities need only be filed once but must be updated as changes are made to the measurement facilities or as otherwise described in this section. At least every three years, the organization responsible for filing the data with the Commission shall certify that the data on file is current.

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Certification & User's Manual Information

Label and User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart A — General:

§ 15.19 Labeling requirements.

(a) In addition to the requirements in Part 2 of this chapter, a device subject to certification or verification shall be labeled as follows:

(1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under Part 73 of this chapter, land mobile operation under Part 90, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

(2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device is verified to comply with Part 15 of the FCC Rules for use with cable television service.

(3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

(5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

§ 15.21 Information to user.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Verification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart B — Unintentional Radiators:

§ 15.105 Information to the user.

(a) For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

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End of Report

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