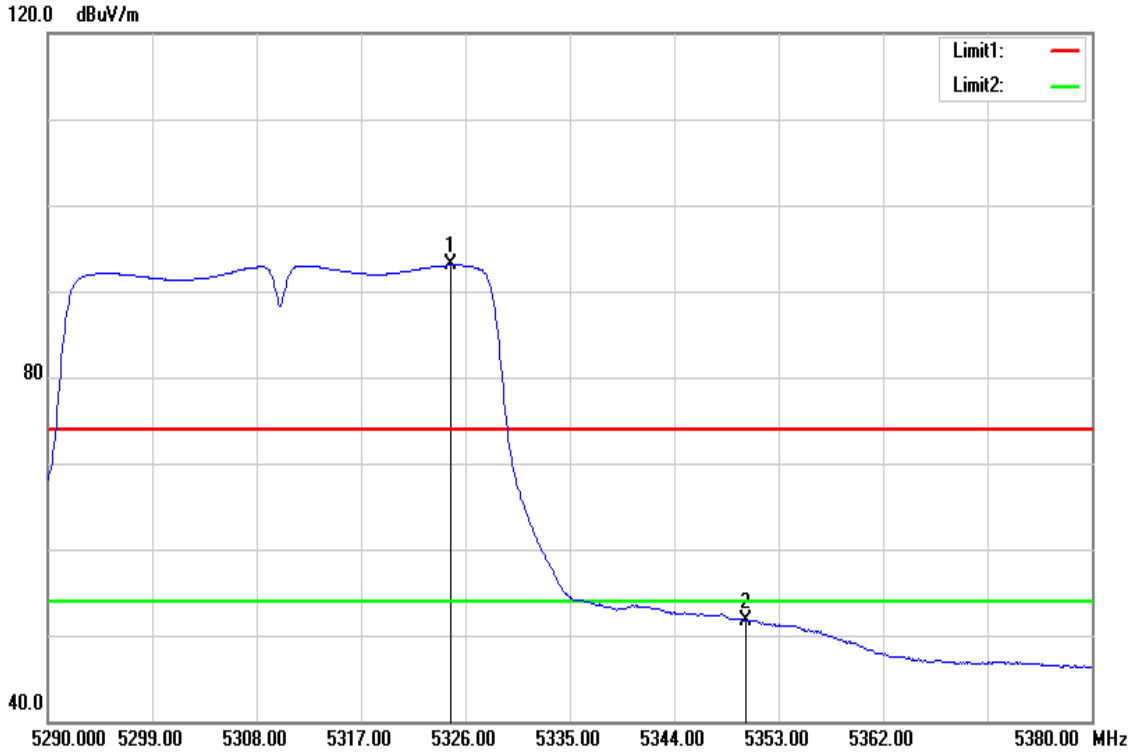
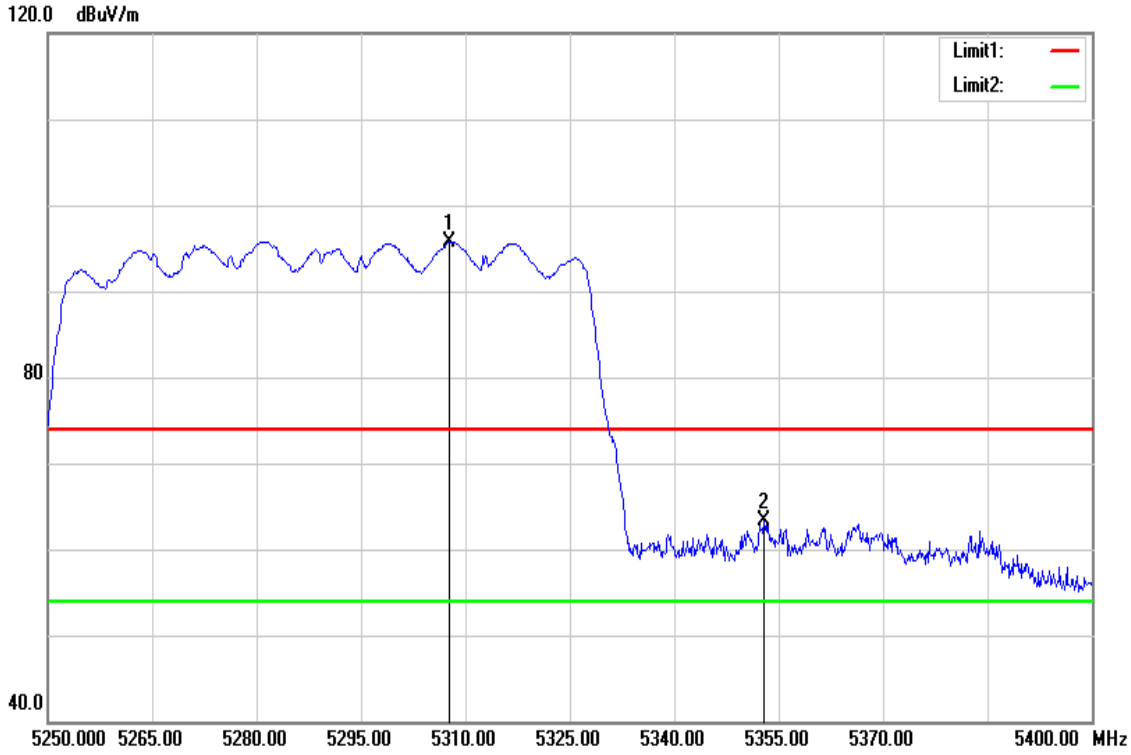
| Test Mode | IEEE 802.11n HT40 High CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 20, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



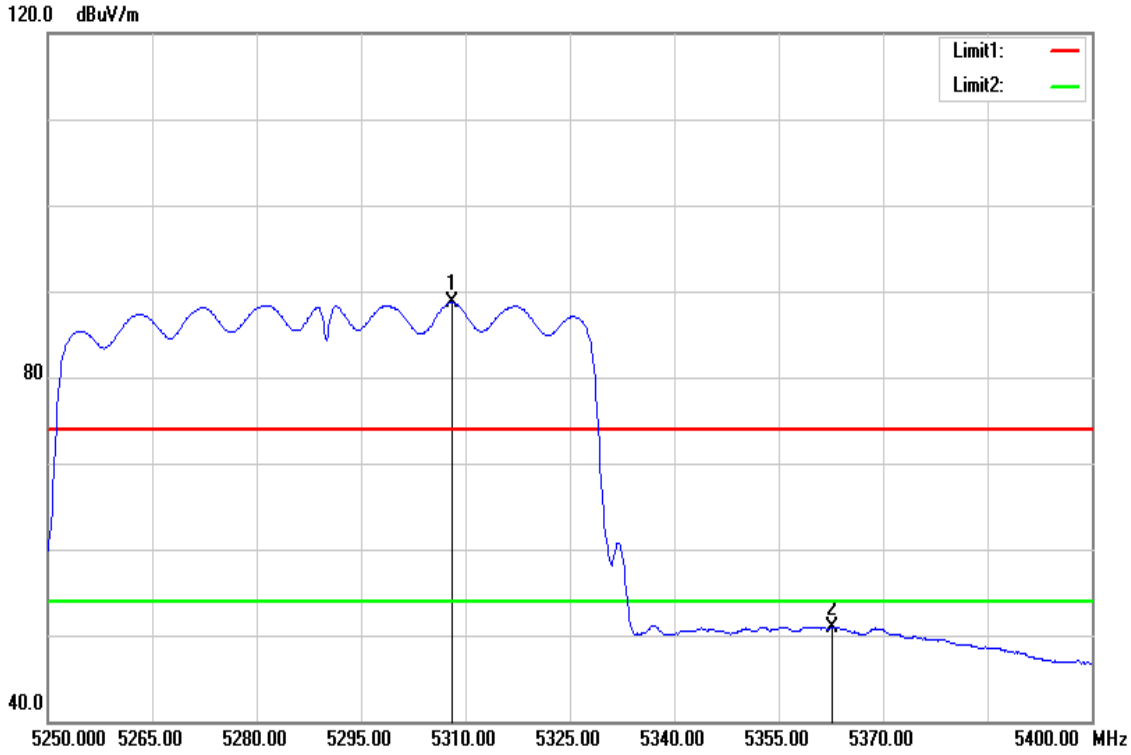

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5324.740 | 87.97 | 5.07 | 93.04 | -- | -- | AVG |
| 5350.210 | 46.49 | 5.31 | 51.80 | 54.00 | -2.20 | AVG |

| Test Mode | IEEE 802.11ac VHT80<br>Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5307.750 | 90.89 | 4.90 | 95.79 | -- | -- | peak |
| 5352.900 | 57.98 | 5.33 | 63.31 | 74.00 | -10.69 | peak |

| Test Mode | IEEE 802.11ac VHT80<br>Mid CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |

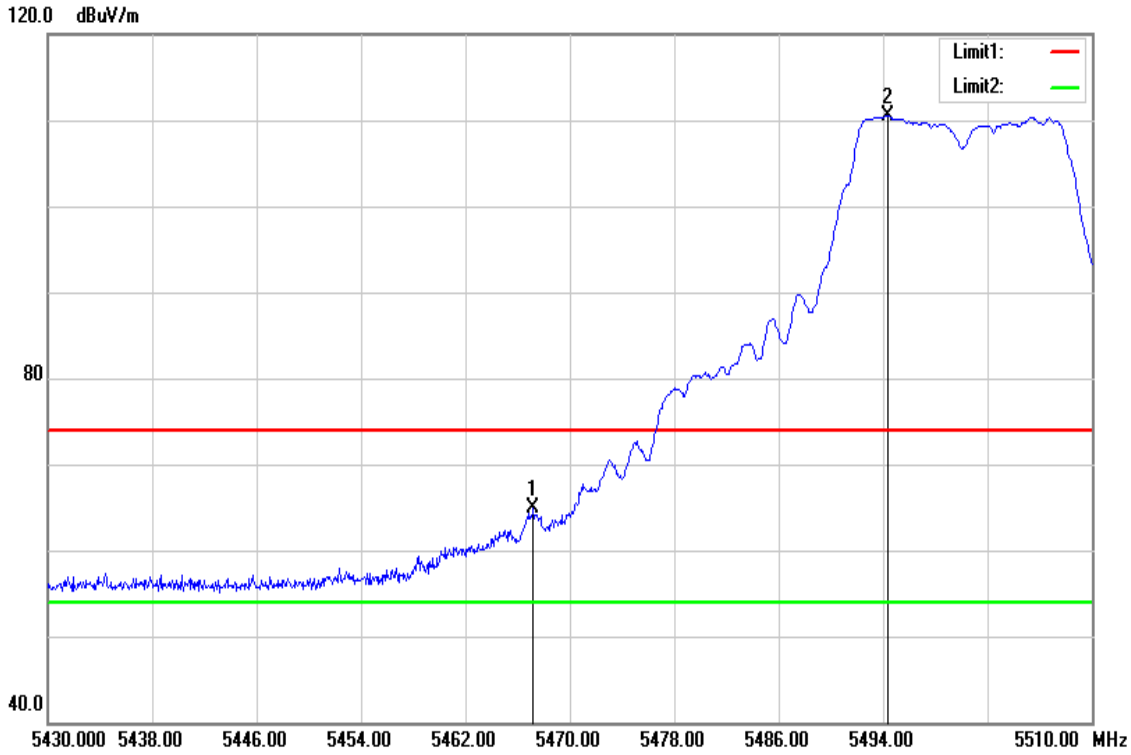



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5308.050 | 83.75 | 4.91 | 88.66 | -- | -- | AVG |
| 5362.650 | 45.57 | 5.41 | 50.98 | 54.00 | -3.02 | AVG |

# Test Data

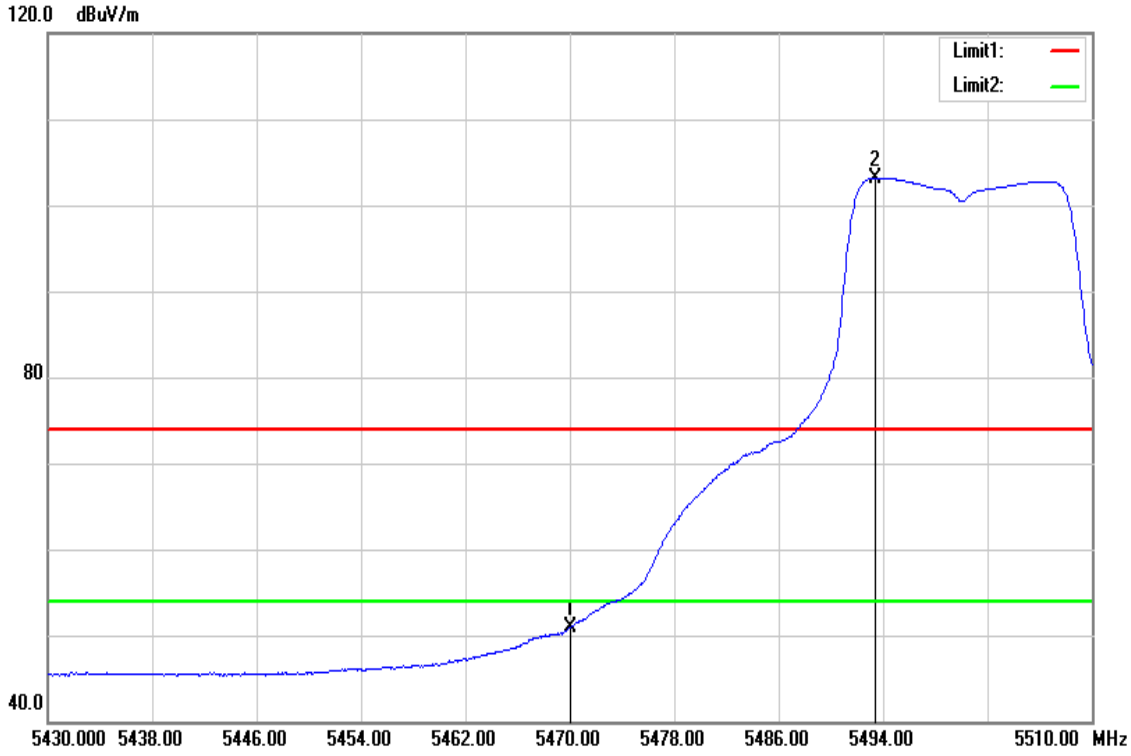
## Band Edge Test Data for UNII-2c

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



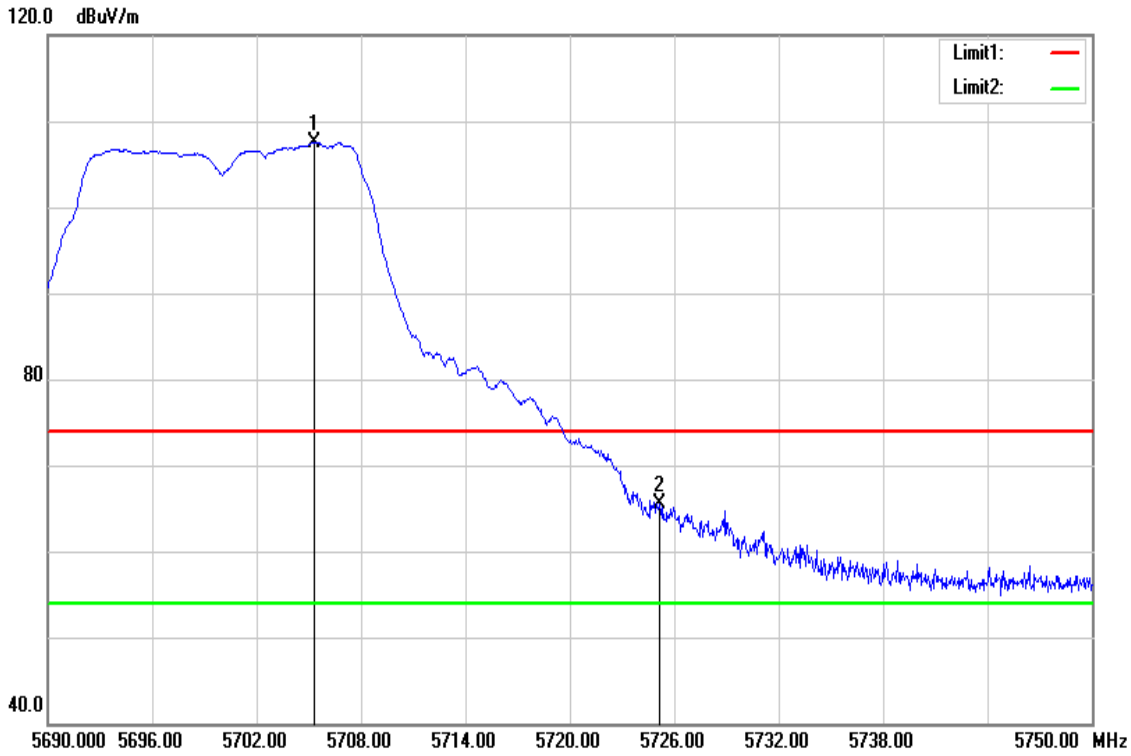

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5467.200 | 59.48 | 5.40 | 64.88 | 74.00 | -9.12 | peak |
| 5494.320 | 105.20 | 5.28 | 110.48 | -- | -- | peak |

| Test Mode | IEEE 802.11a Low CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



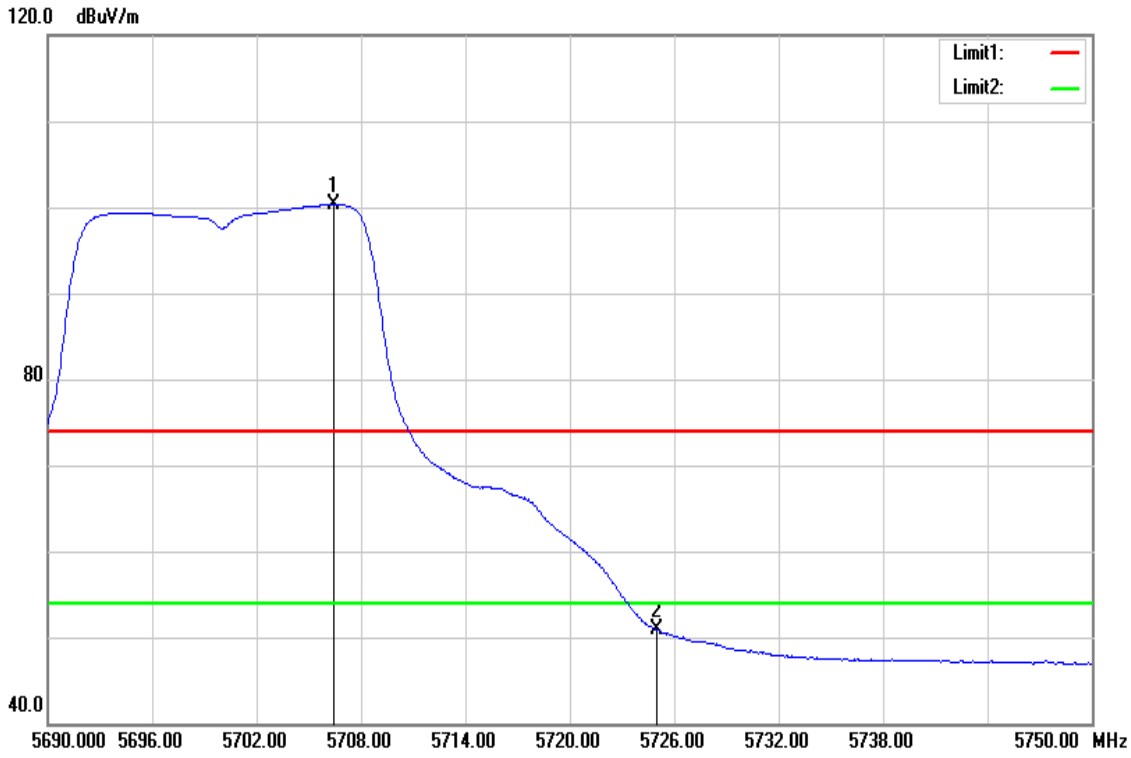

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5470.000 | 45.46 | 5.39 | 50.85 | 54.00 | -3.15 | AVG |
| 5493.440 | 97.85 | 5.28 | 103.13 | -- | -- | AVG |

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



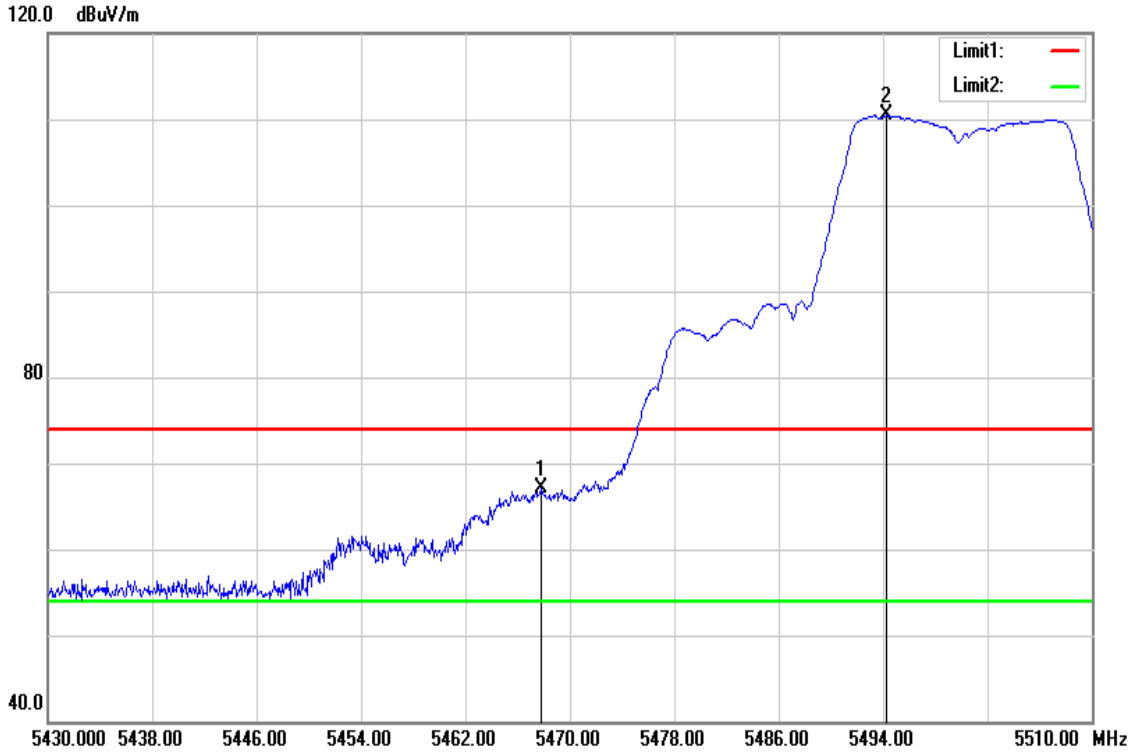

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5705.300 | 101.43 | 6.12 | 107.55 | -- | -- | peak |
| 5725.160 | 59.32 | 6.21 | 65.53 | 74.00 | -8.47 | peak |

| Test Mode | IEEE 802.11a High CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



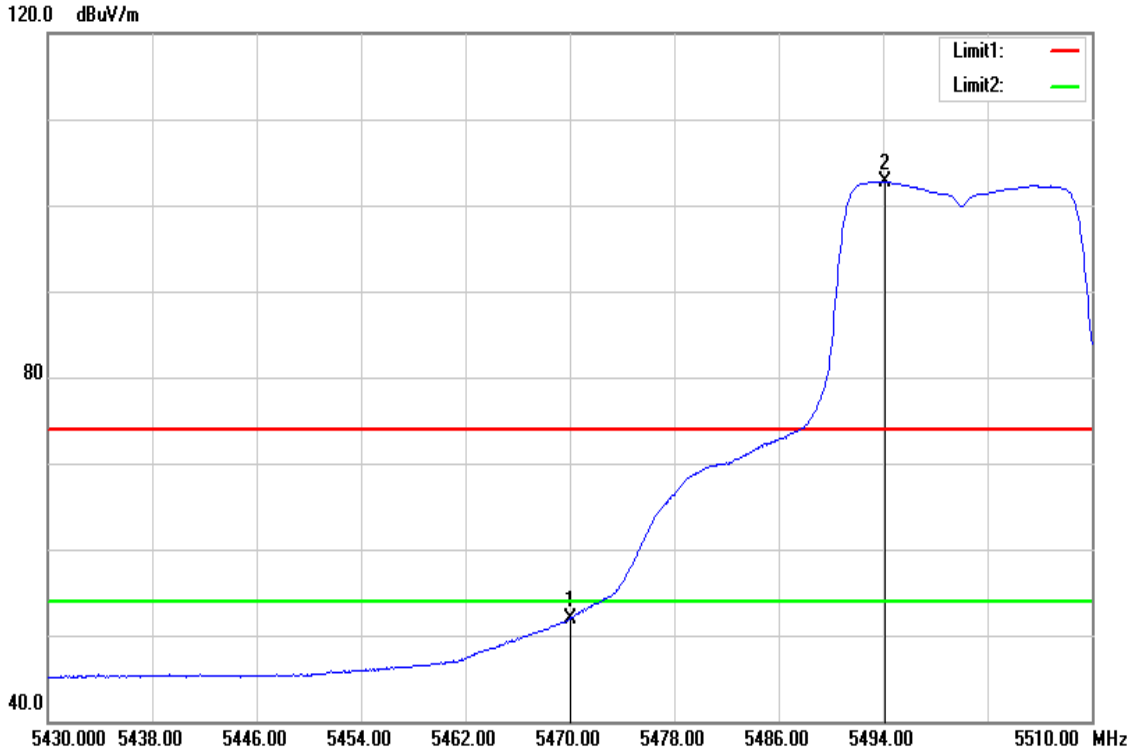

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5706.440 | 94.18 | 6.13 | 100.31 | -- | -- | AVG |
| 5725.000 | 44.67 | 6.21 | 50.88 | 74.00 | -23.12 | AVG |

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



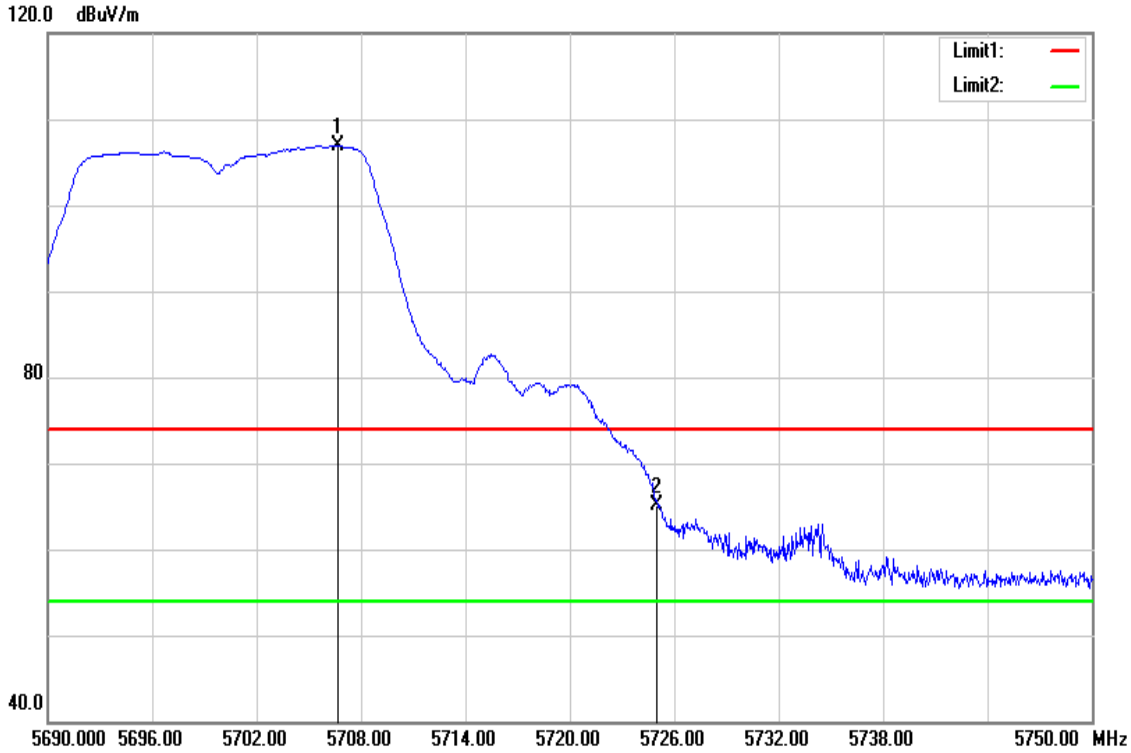

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5467.760 | 61.78 | 5.40 | 67.18 | 74.00 | -6.82 | peak |
| 5494.240 | 105.15 | 5.28 | 110.43 | -- | -- | peak |

| Test Mode | IEEE 802.11n HT20 Low CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



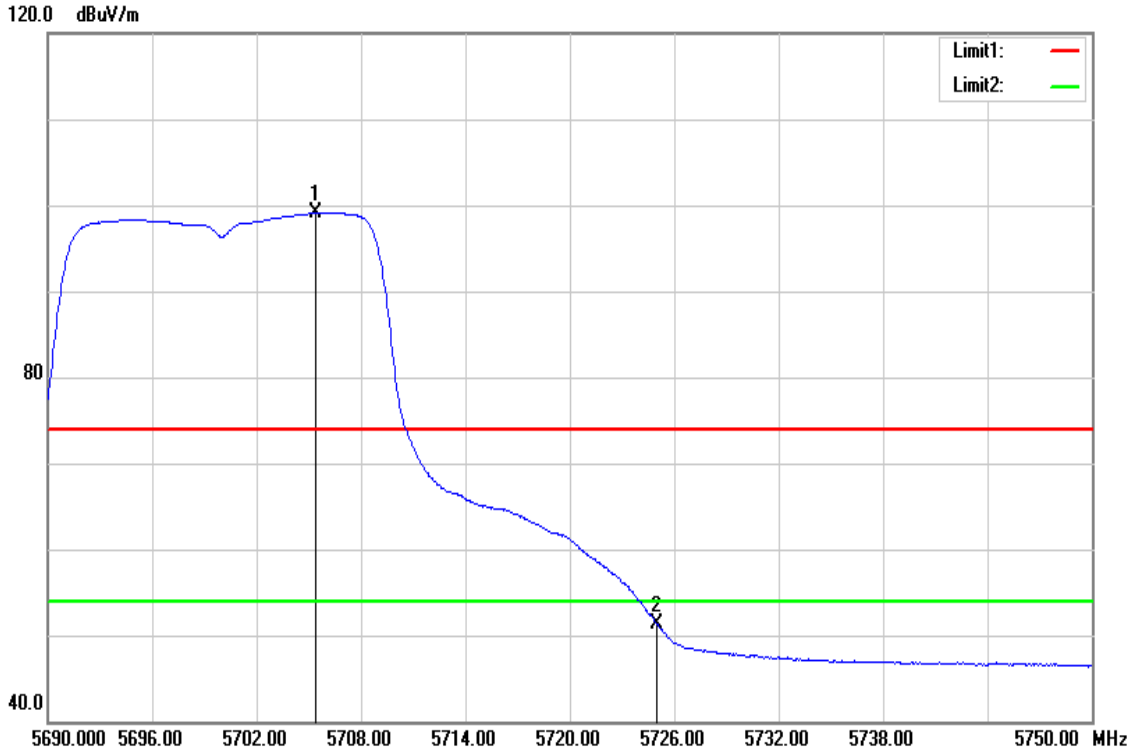

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5470.000 | 46.58 | 5.39 | 51.97 | 54.00 | -2.03 | AVG |
| 5494.160 | 97.38 | 5.28 | 102.66 | -- | -- | AVG |

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



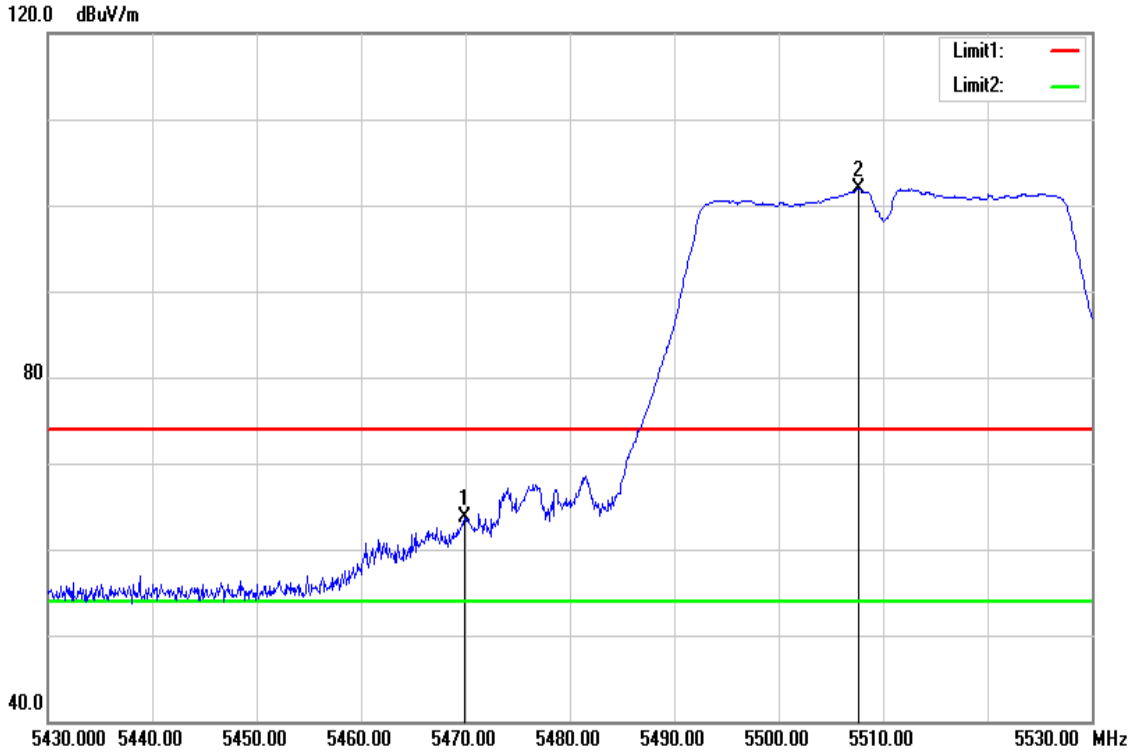

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5706.680 | 100.82 | 6.13 | 106.95 | -- | -- | peak |
| 5725.000 | 58.98 | 6.21 | 65.19 | 74.00 | -8.81 | peak |

| Test Mode | IEEE 802.11n HT20 High CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



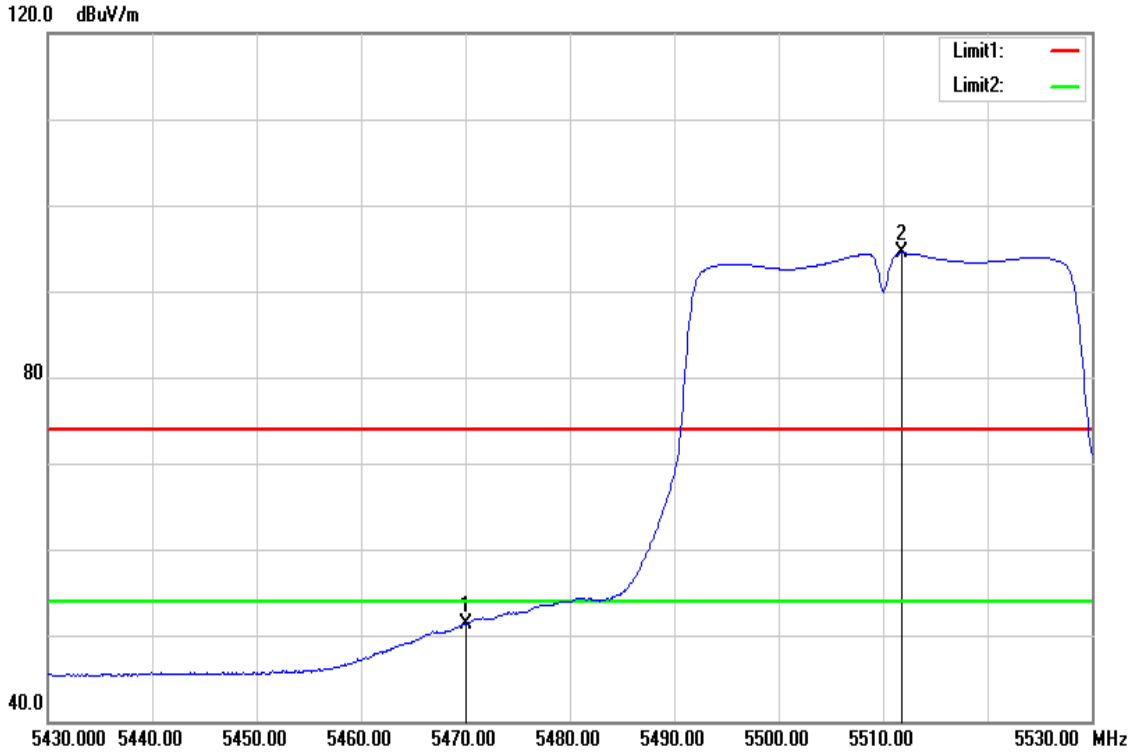

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5705.420 | 92.95 | 6.13 | 99.08 | -- | -- | AVG |
| 5725.000 | 45.12 | 6.21 | 51.33 | 54.00 | -2.67 | AVG |

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



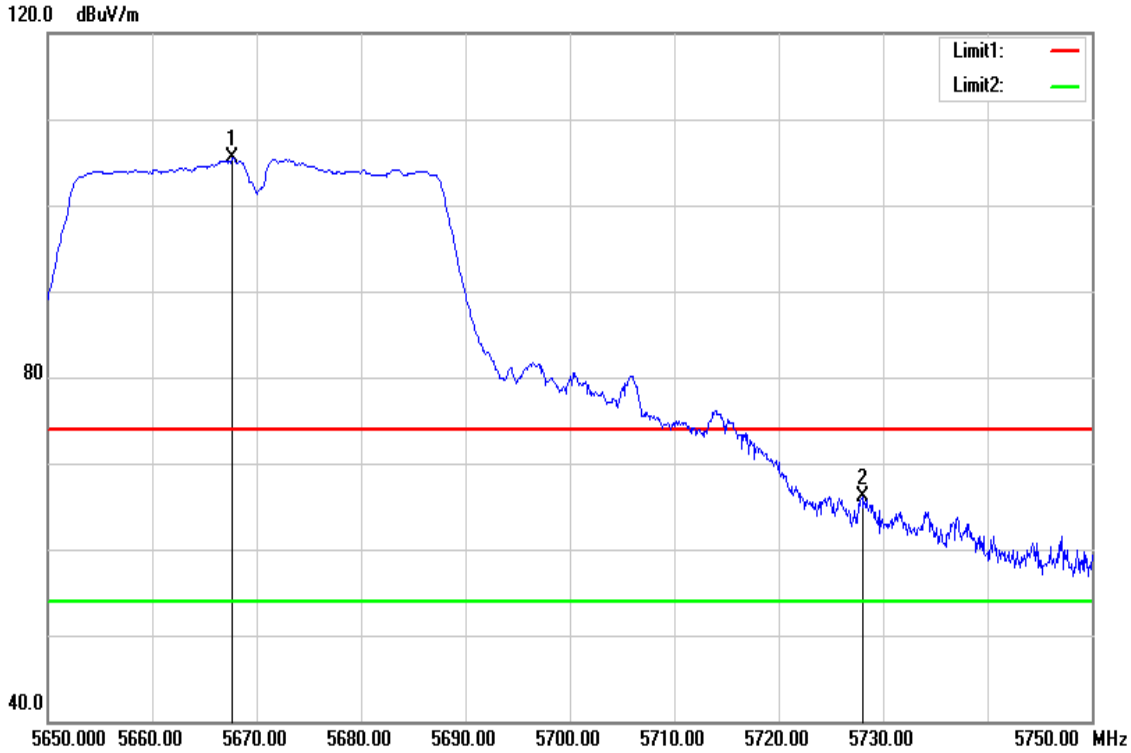

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5469.900 | 58.40 | 5.39 | 63.79 | 74.00 | -10.21 | peak |
| 5507.700 | 96.69 | 5.28 | 101.97 | -- | -- | peak |

| Test Mode | IEEE 802.11n HT40 Low CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



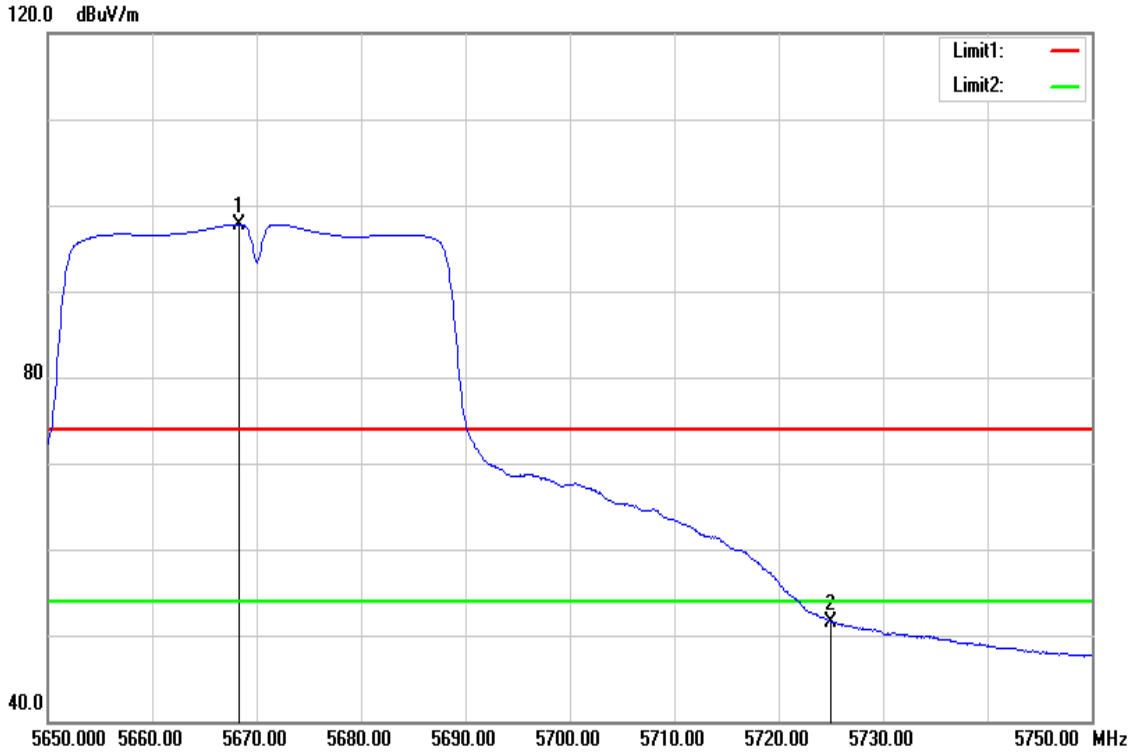

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5470.000 | 45.91 | 5.39 | 51.30 | 54.00 | -2.70 | AVG |
| 5511.800 | 89.14 | 5.30 | 94.44 | -- | -- | AVG |

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 20, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



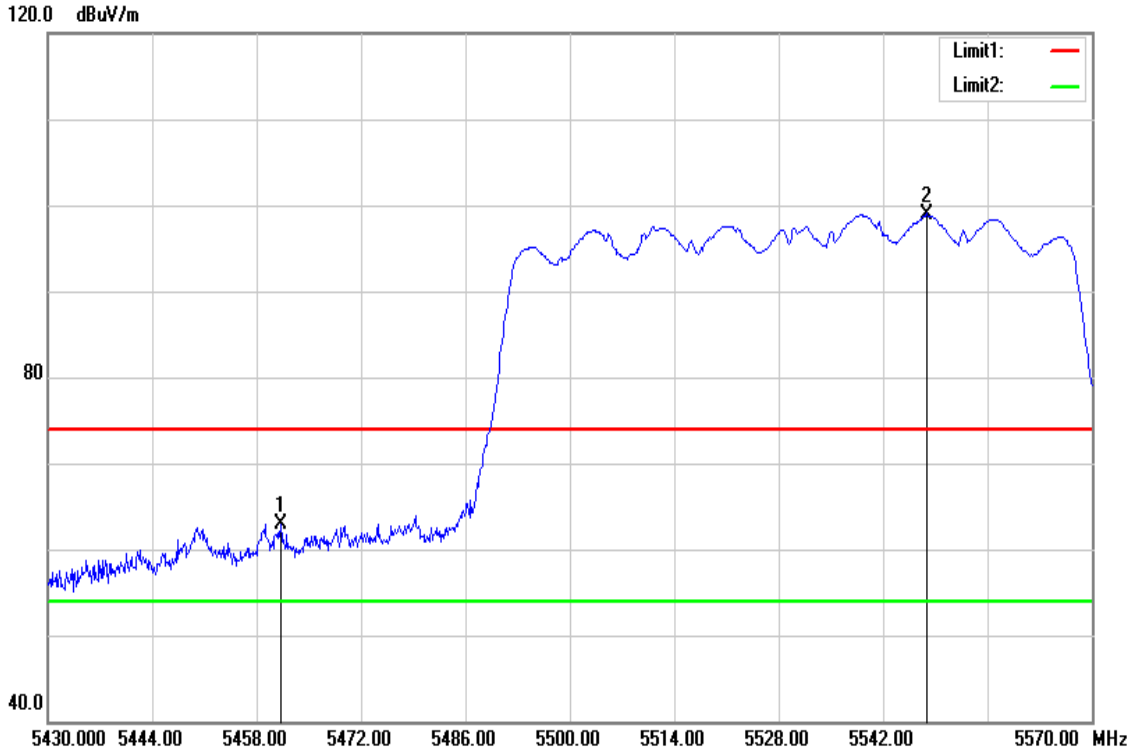

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5667.600 | 99.62 | 5.96 | 105.58 | -- | -- | peak |
| 5728.000 | 59.81 | 6.22 | 66.03 | 74.00 | -7.97 | peak |

| Test Mode | IEEE 802.11n HT40 High CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 20, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



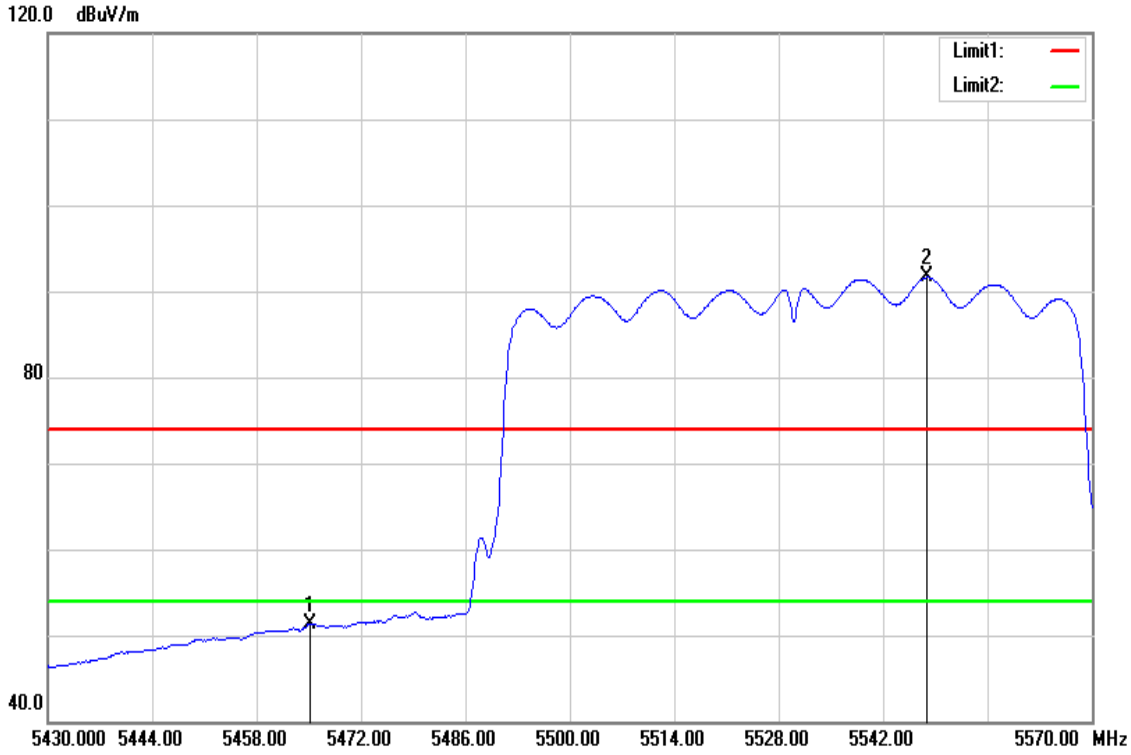

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5668.300 | 91.82 | 5.97 | 97.79 | -- | -- | AVG |
| 5725.000 | 45.36 | 6.21 | 51.57 | 54.00 | -2.43 | AVG |

| Test Mode | IEEE 802.11ac VHT80<br>Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5461.220 | 57.50 | 5.43 | 62.93 | 74.00 | -11.07 | peak |
| 5547.880 | 93.55 | 5.45 | 99.00 | -- | -- | peak |

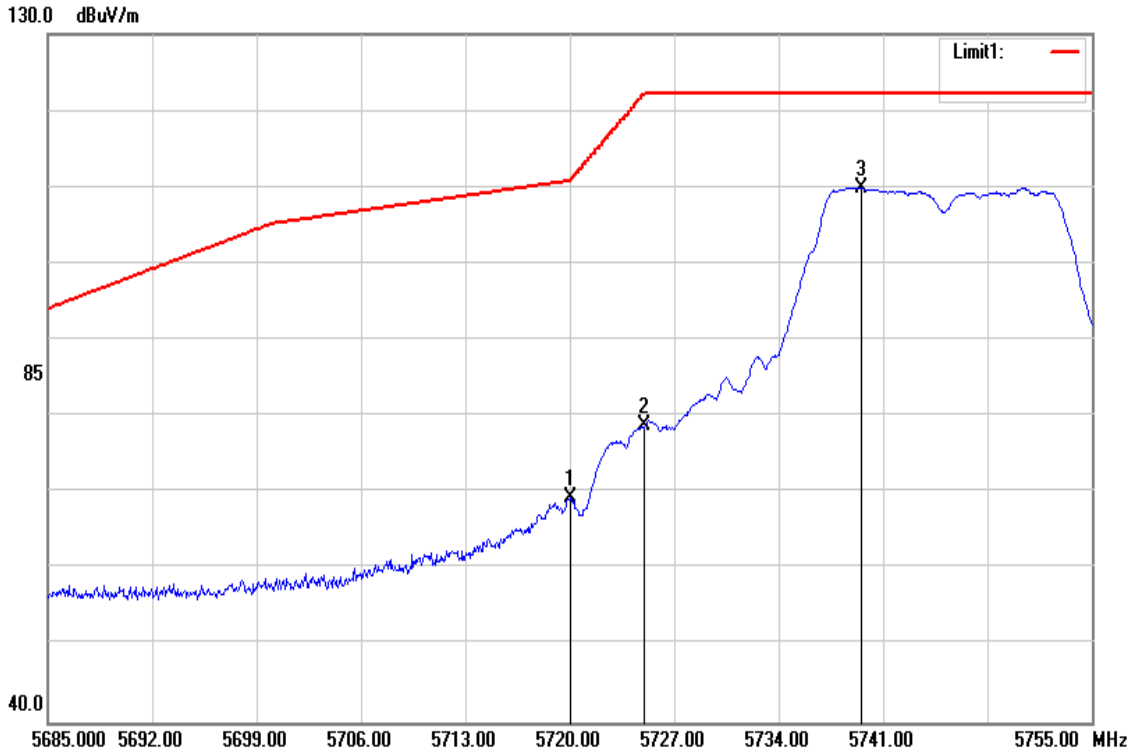
| Test Mode | IEEE 802.11ac VHT80<br>Mid CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5465.140 | 45.91 | 5.41 | 51.32 | 54.00 | -2.68 | AVG |
| 5547.880 | 86.17 | 5.45 | 91.62 | -- | -- | AVG |

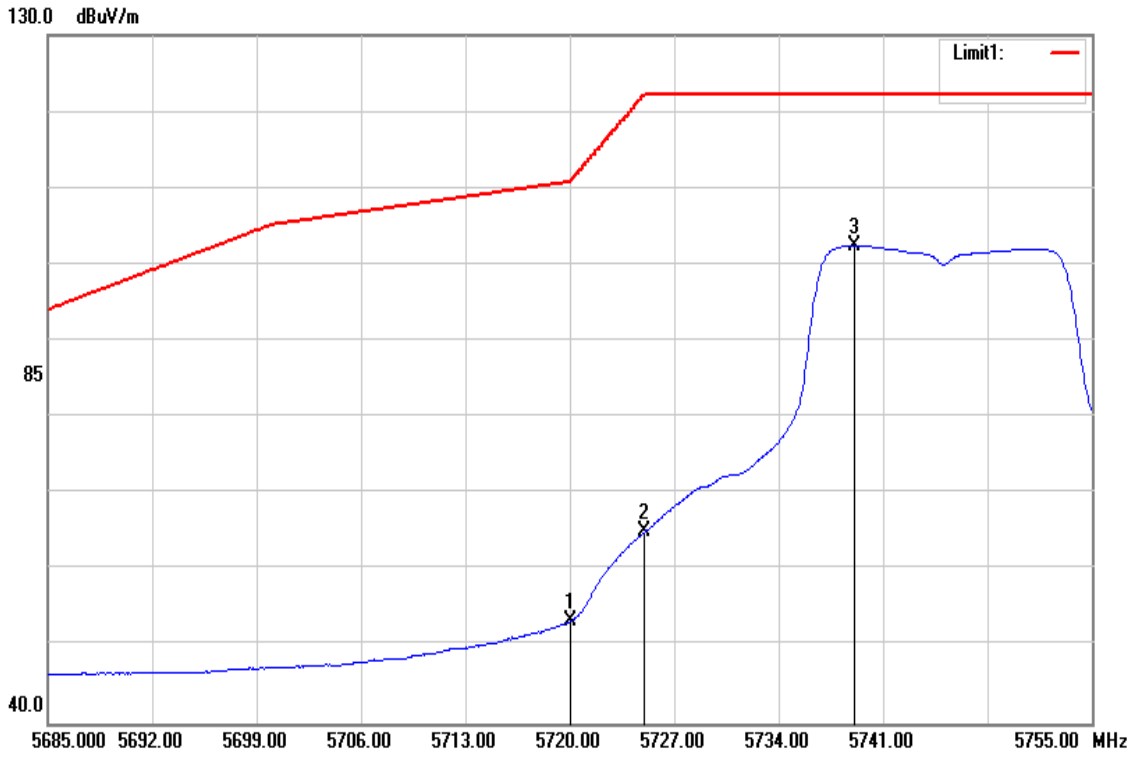
## Band Edge Test Data for UNII-3

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



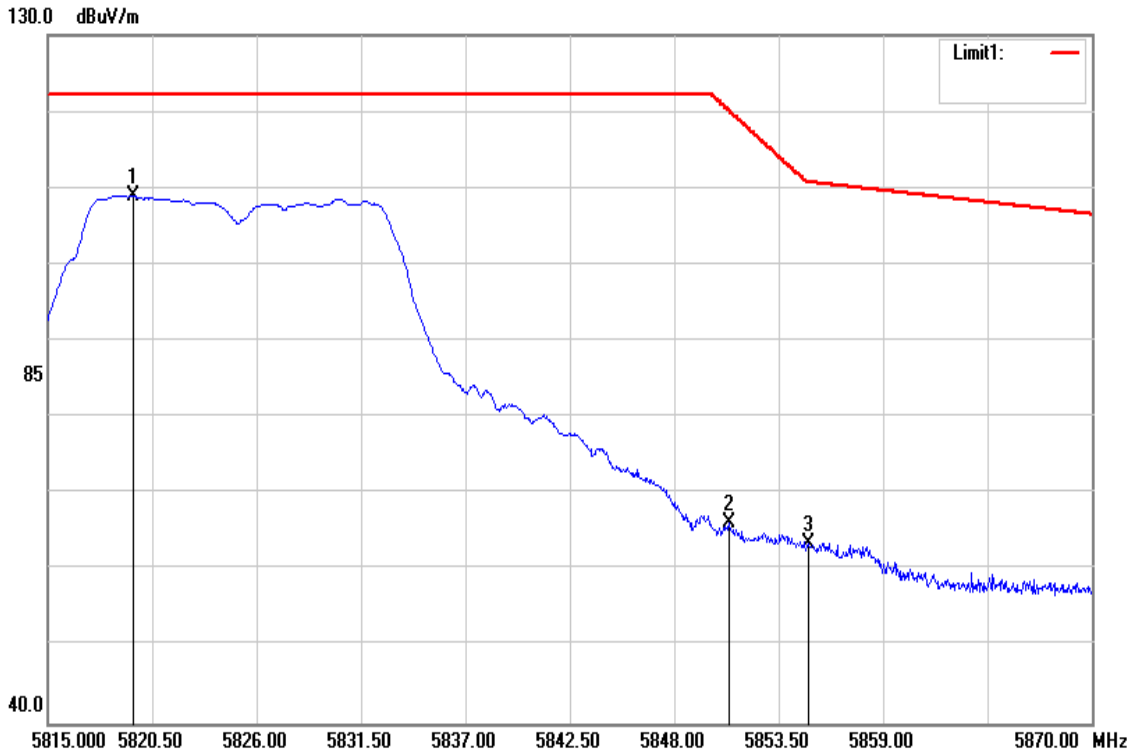

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5720.000 | 63.16 | 6.19 | 69.35 | 110.80 | -41.45 | peak |
| 5725.000 | 72.59 | 6.21 | 78.80 | 122.20 | -43.40 | peak |
| 5739.530 | 103.64 | 6.27 | 109.91 | -- | -- | peak |

| Test Mode | IEEE 802.11a Low CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



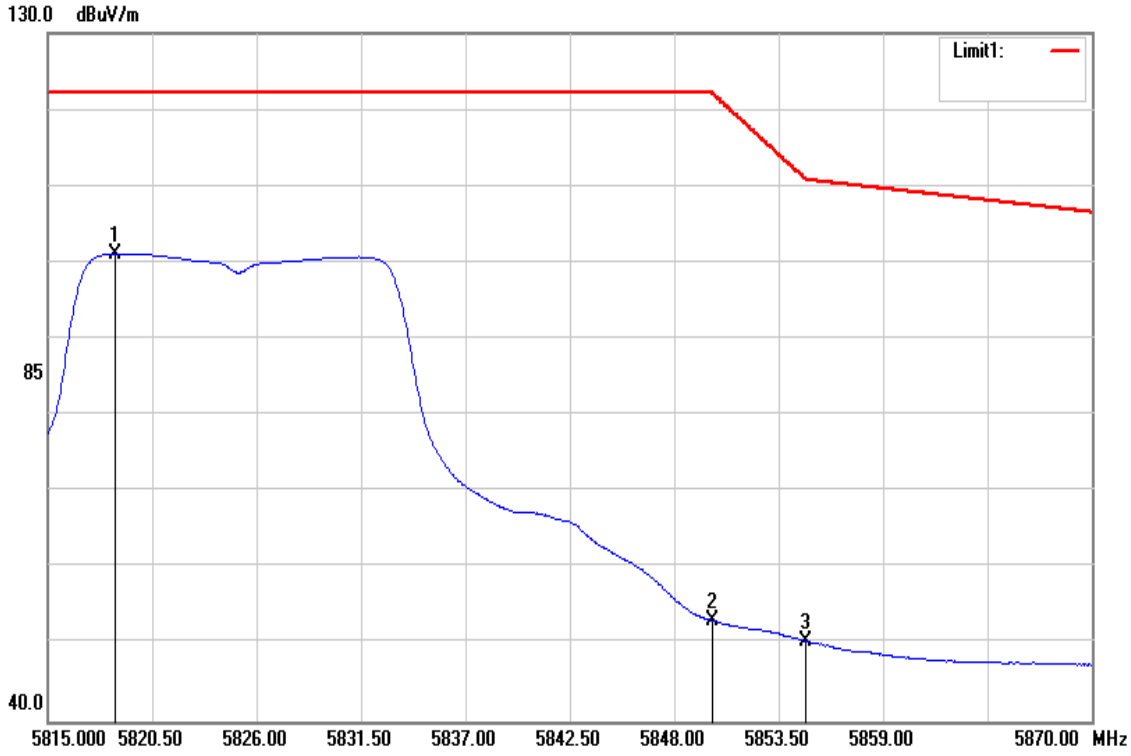

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5720.070 | 47.18 | 6.19 | 53.37 | 110.96 | -57.59 | AVG |
| 5725.000 | 58.88 | 6.21 | 65.09 | 122.20 | -57.11 | AVG |
| 5739.040 | 96.13 | 6.27 | 102.40 | -- | -- | AVG |

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



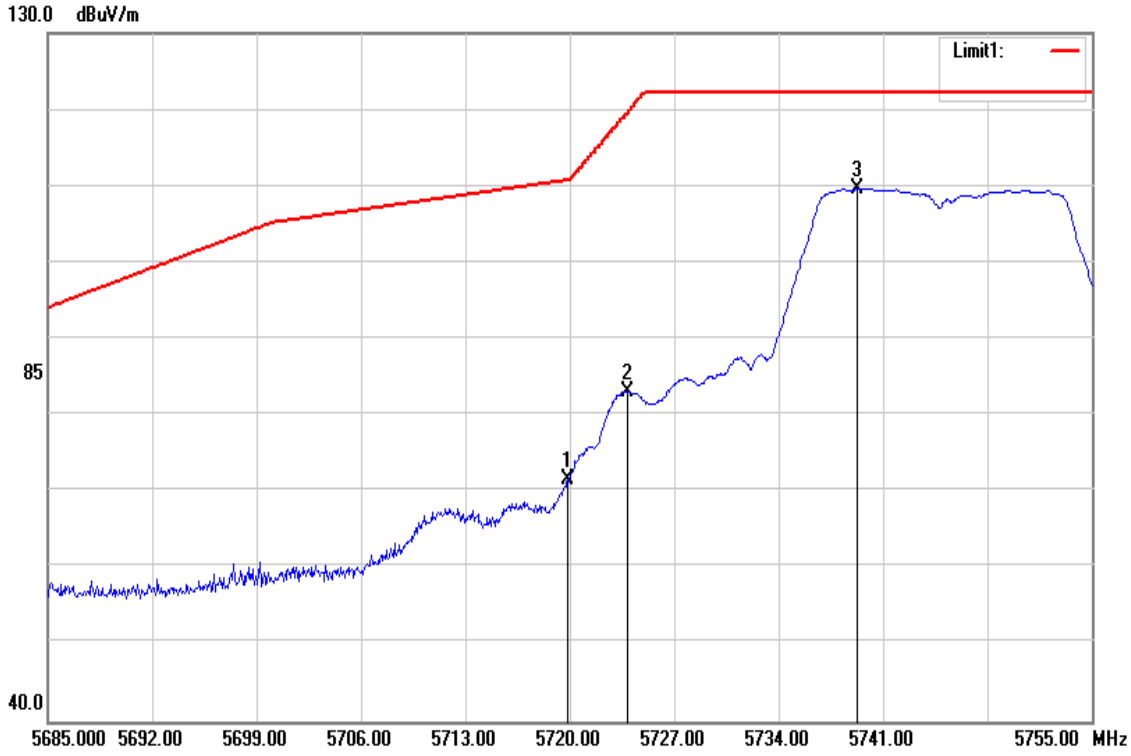

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5819.510 | 102.34 | 6.61 | 108.95 | -- | -- | peak |
| 5850.860 | 59.37 | 6.74 | 66.11 | 120.24 | -54.13 | peak |
| 5855.040 | 56.82 | 6.76 | 63.58 | 110.79 | -47.21 | peak |

| Test Mode | IEEE 802.11a High CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



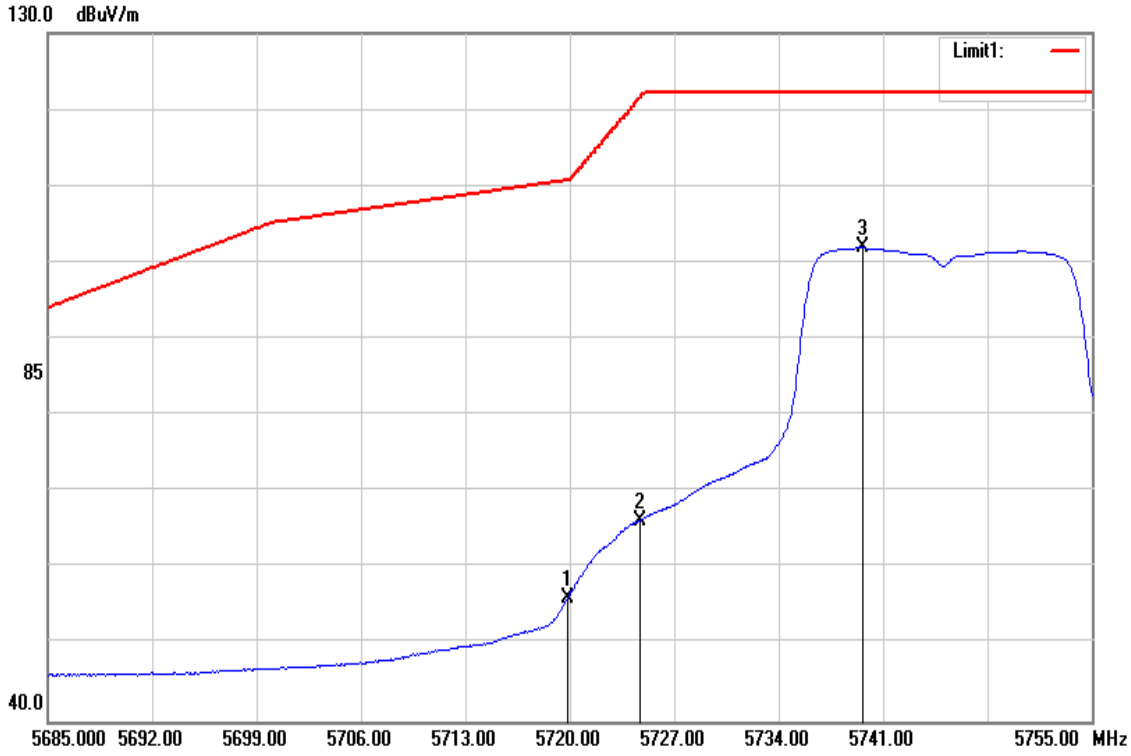

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5818.575 | 94.58 | 6.61 | 101.19 | -- | -- | peak |
| 5850.000 | 46.44 | 6.74 | 53.18 | 122.20 | -69.02 | peak |
| 5854.930 | 43.75 | 6.76 | 50.51 | 110.96 | -60.45 | peak |

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



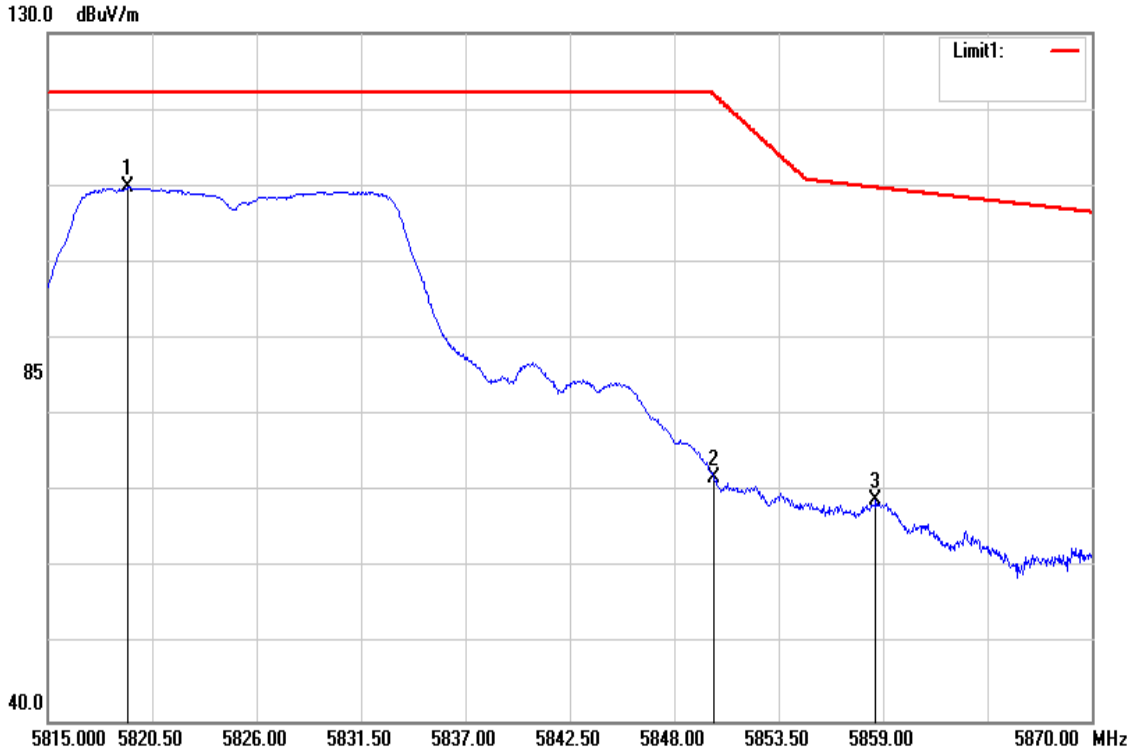

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5719.860 | 65.34 | 6.19 | 71.53 | 110.76 | -39.23 | peak |
| 5723.850 | 76.92 | 6.20 | 83.12 | 119.58 | -36.46 | peak |
| 5739.250 | 103.44 | 6.27 | 109.71 | -- | -- | peak |

| Test Mode | IEEE 802.11n HT20 Low CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



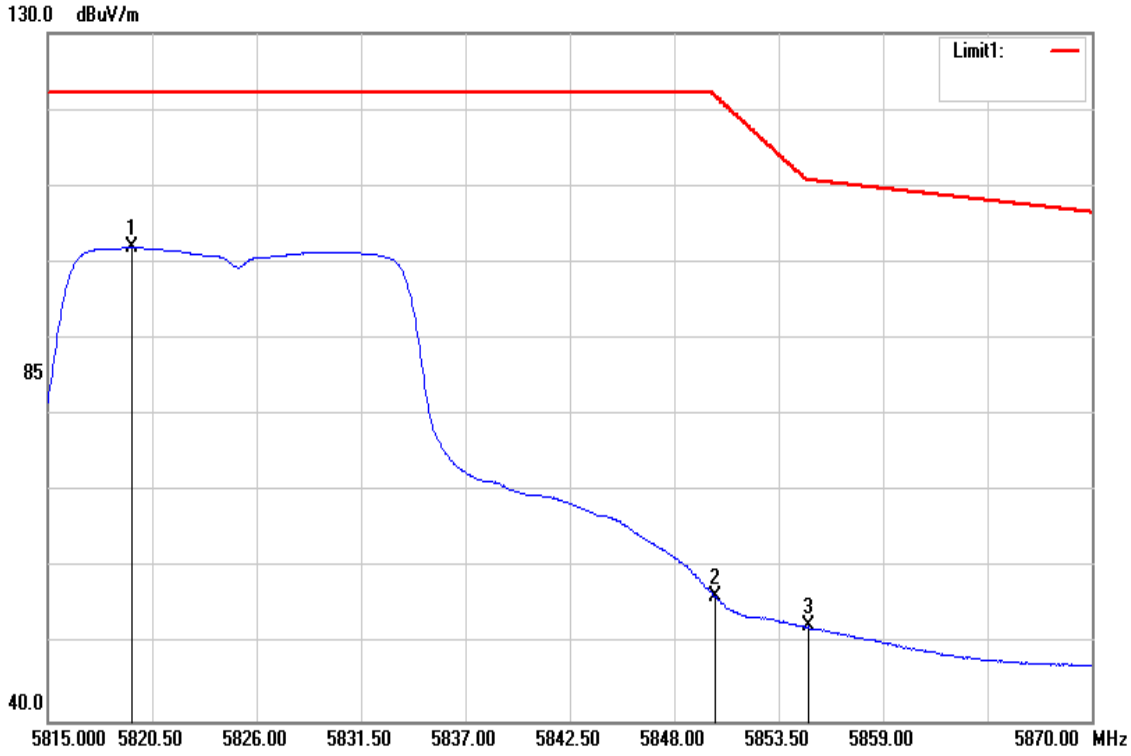

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5719.860 | 49.96 | 6.19 | 56.15 | 110.76 | -54.61 | AVG |
| 5724.690 | 60.08 | 6.21 | 66.29 | 121.49 | -55.20 | AVG |
| 5739.600 | 95.64 | 6.27 | 101.91 | -- | -- | AVG |

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



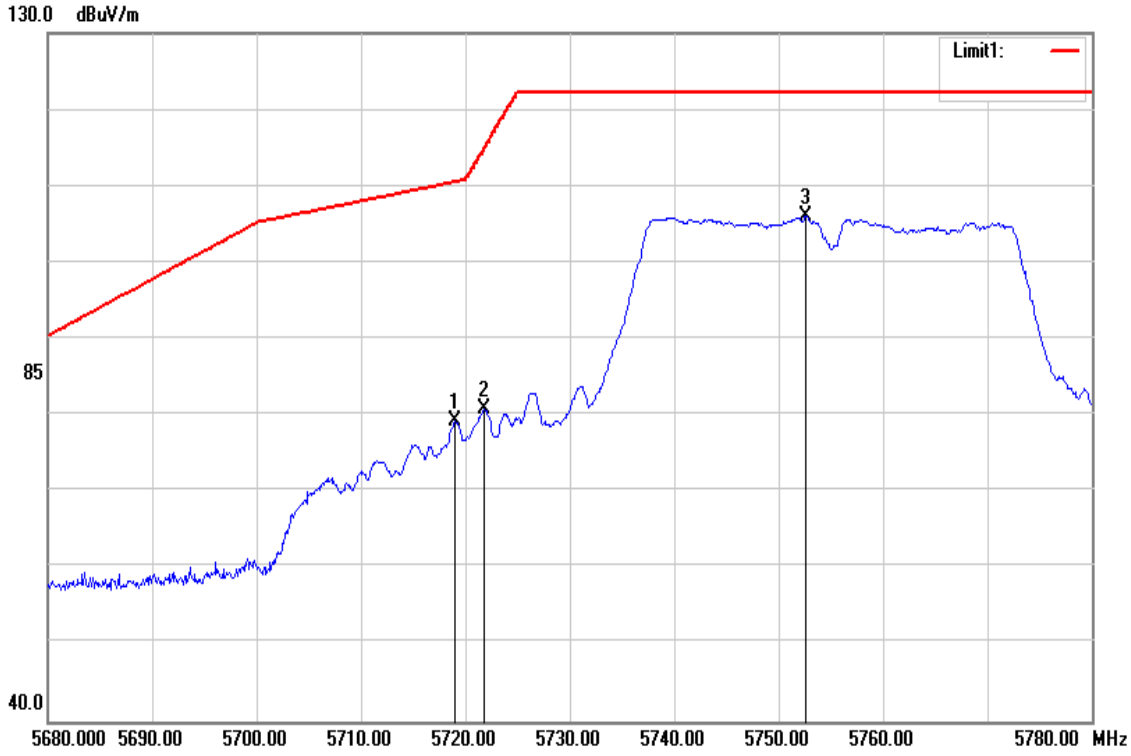

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5819.235 | 103.19 | 6.61 | 109.80 | -- | -- | peak |
| 5850.090 | 65.08 | 6.74 | 71.82 | 121.99 | -50.17 | peak |
| 5858.615 | 62.05 | 6.78 | 68.83 | 109.79 | -40.96 | peak |

| Test Mode | IEEE 802.11n HT20 High CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



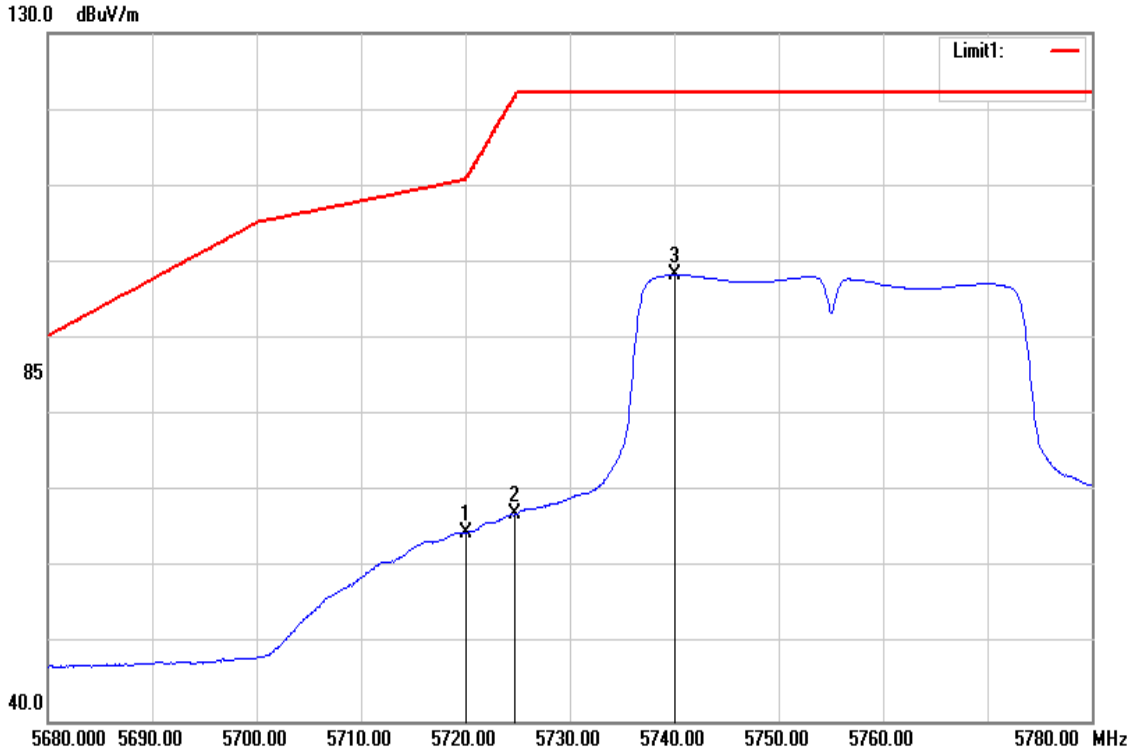

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5819.400 | 95.35 | 6.61 | 101.96 | -- | -- | AVG |
| 5850.145 | 49.65 | 6.74 | 56.39 | 121.87 | -65.48 | AVG |
| 5855.040 | 45.63 | 6.76 | 52.39 | 110.79 | -58.40 | AVG |

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 20, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



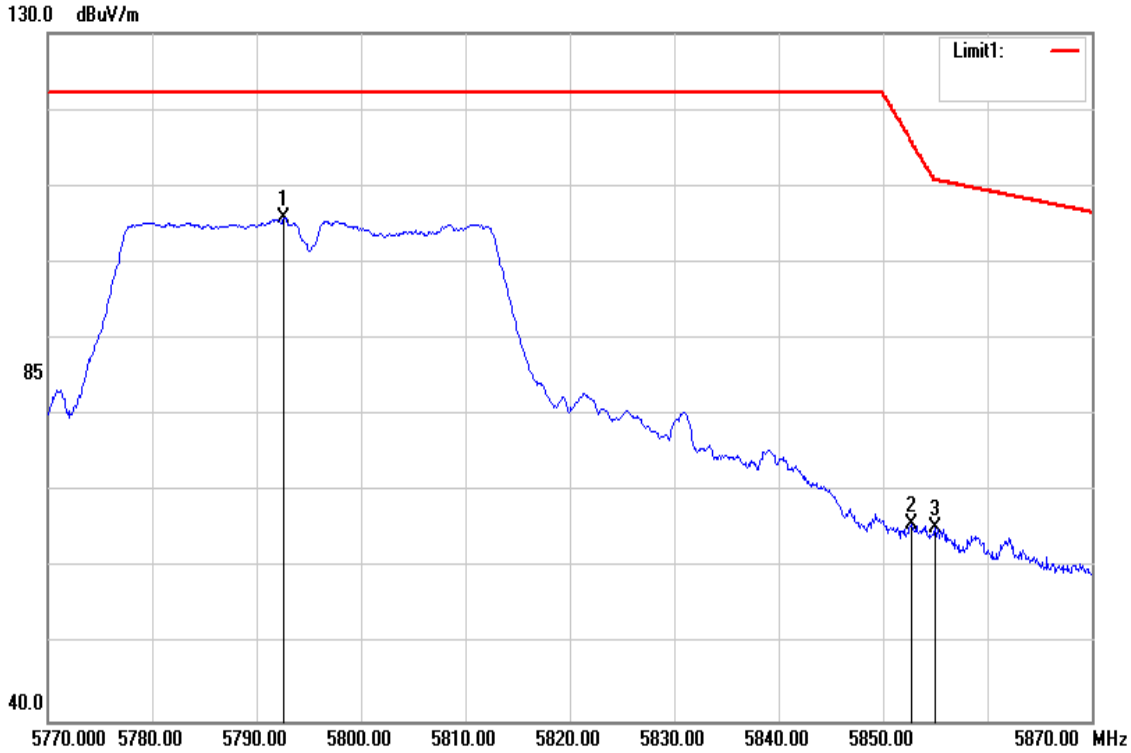

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5719.000 | 72.98 | 6.18 | 79.16 | 110.52 | -31.36 | peak |
| 5721.800 | 74.57 | 6.19 | 80.76 | 114.90 | -34.14 | peak |
| 5752.600 | 99.72 | 6.33 | 106.05 | -- | -- | peak |

| Test Mode | IEEE 802.11n HT40 Low CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 20, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



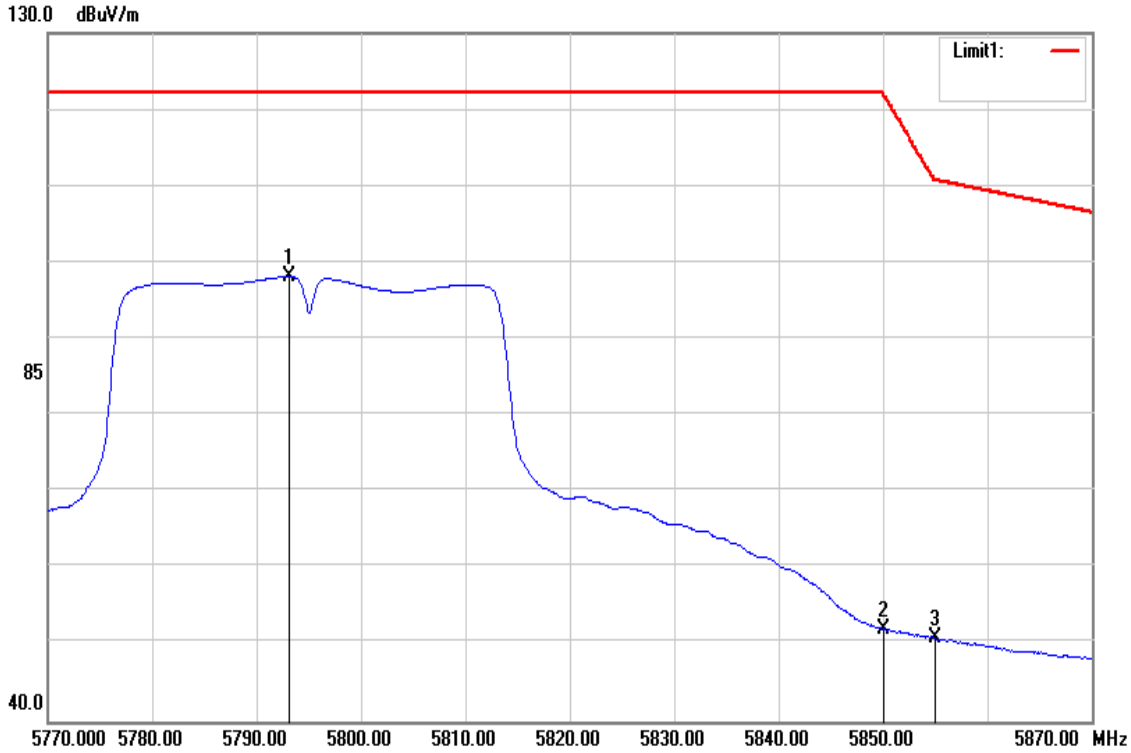

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5720.000 | 58.54 | 6.19 | 64.73 | 110.80 | -46.07 | AVG |
| 5724.700 | 60.81 | 6.21 | 67.02 | 121.52 | -54.50 | AVG |
| 5740.100 | 92.17 | 6.27 | 98.44 | -- | -- | AVG |

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 20, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |



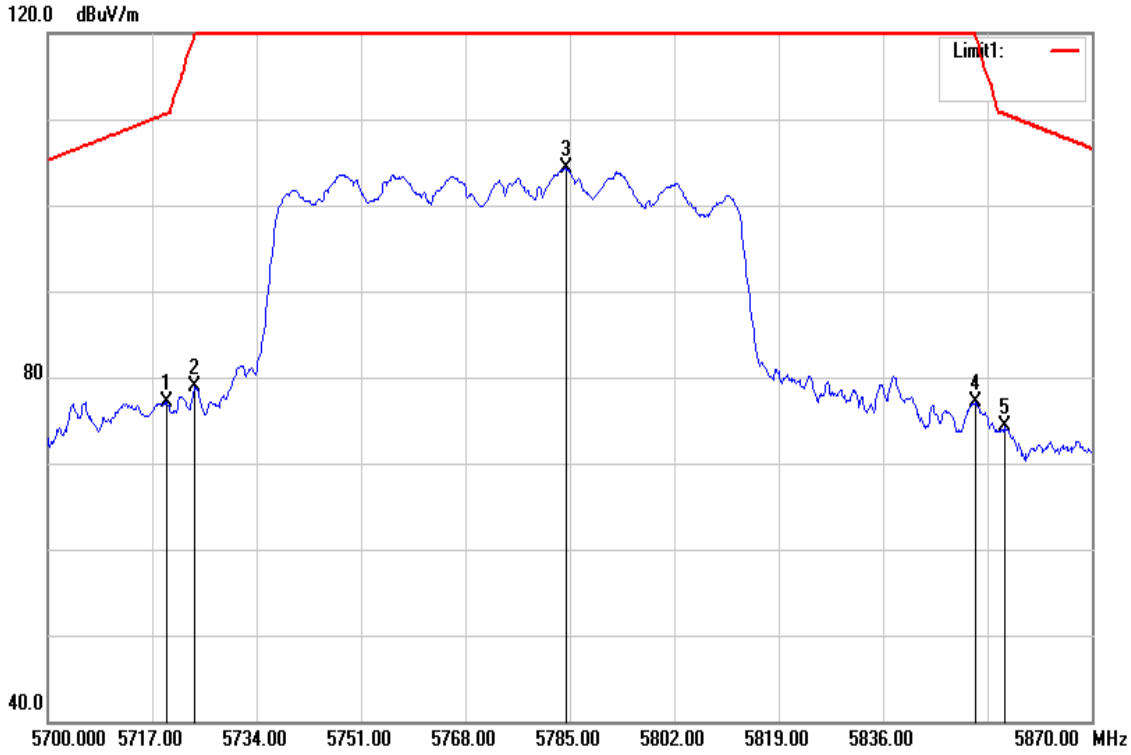

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5792.600 | 99.41 | 6.50 | 105.91 | -- | -- | peak |
| 5852.700 | 59.10 | 6.75 | 65.85 | 116.04 | -50.19 | peak |
| 5855.000 | 58.55 | 6.76 | 65.31 | 110.80 | -45.49 | peak |

| Test Mode | IEEE 802.11n HT40 High CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 20, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |



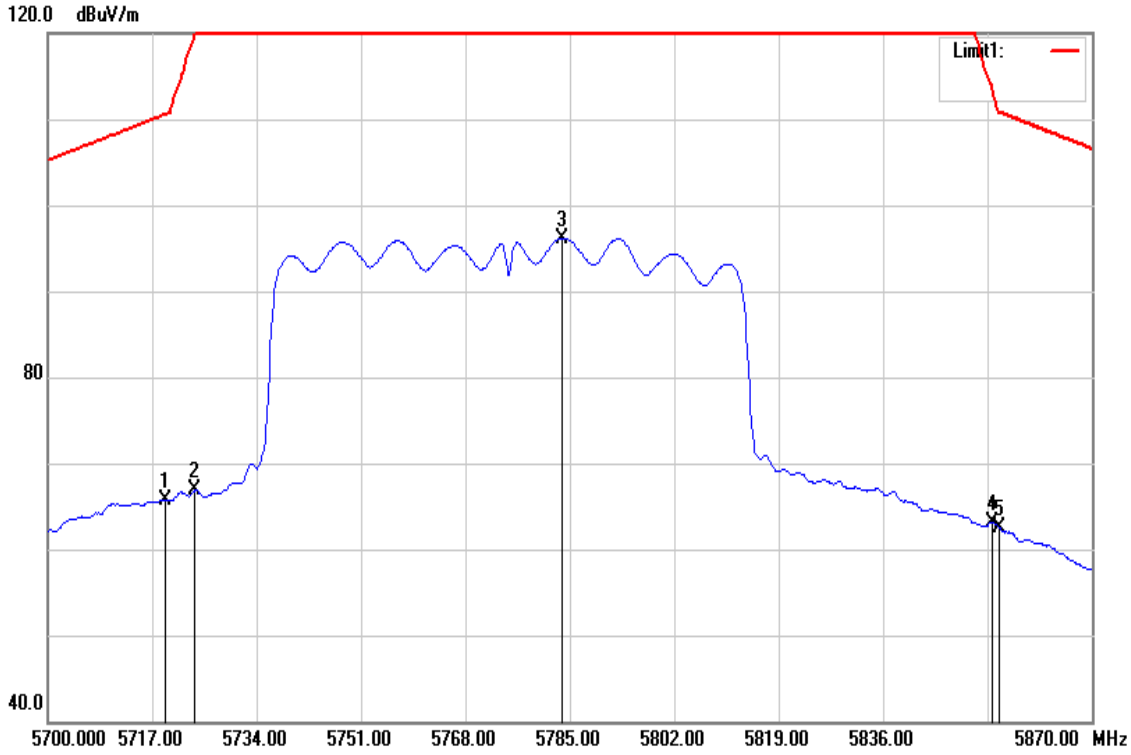

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5793.100 | 91.62 | 6.50 | 98.12 | -- | -- | AVG |
| 5850.100 | 45.33 | 6.74 | 52.07 | 121.97 | -69.90 | AVG |
| 5855.000 | 44.05 | 6.76 | 50.81 | 110.80 | -59.99 | AVG |

| Test Mode | IEEE 802.11ac VHT80<br>Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5719.380 | 70.99 | 6.18 | 77.17 | 110.63 | -33.46 | peak |
| 5723.800 | 72.65 | 6.20 | 78.85 | 119.46 | -40.61 | peak |
| 5784.320 | 97.79 | 6.46 | 104.25 | -- | -- | peak |
| 5851.130 | 70.34 | 6.75 | 77.09 | 119.62 | -42.53 | peak |
| 5855.720 | 67.46 | 6.77 | 74.23 | 110.60 | -36.37 | peak |

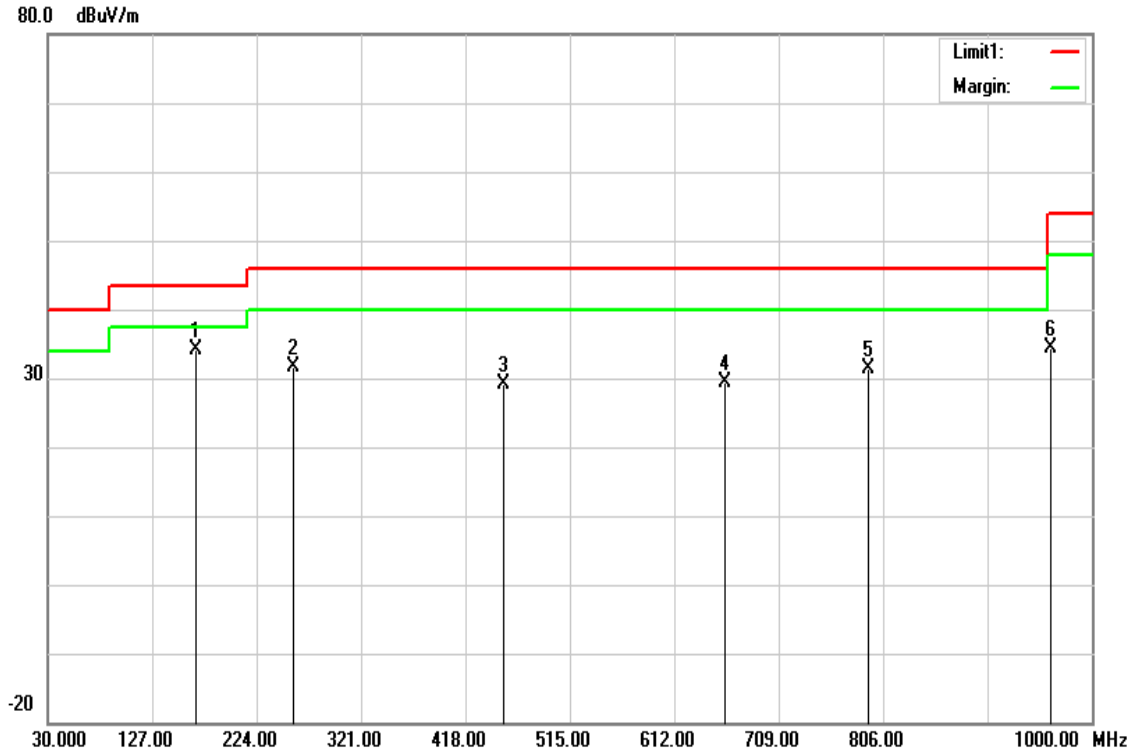
| Test Mode | IEEE 802.11ac VHT80<br>Mid CH | Temperature | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Band Edge | Test Date | May 19, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Average | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 5719.210 | 59.60 | 6.18 | 65.78 | 110.58 | -44.80 | AVG |
| 5723.970 | 60.61 | 6.20 | 66.81 | 119.85 | -53.04 | AVG |
| 5783.640 | 89.74 | 6.46 | 96.20 | -- | -- | AVG |
| 5853.850 | 56.38 | 6.76 | 63.14 | 113.42 | -50.28 | AVG |
| 5854.870 | 55.83 | 6.76 | 62.59 | 111.10 | -48.51 | AVG |

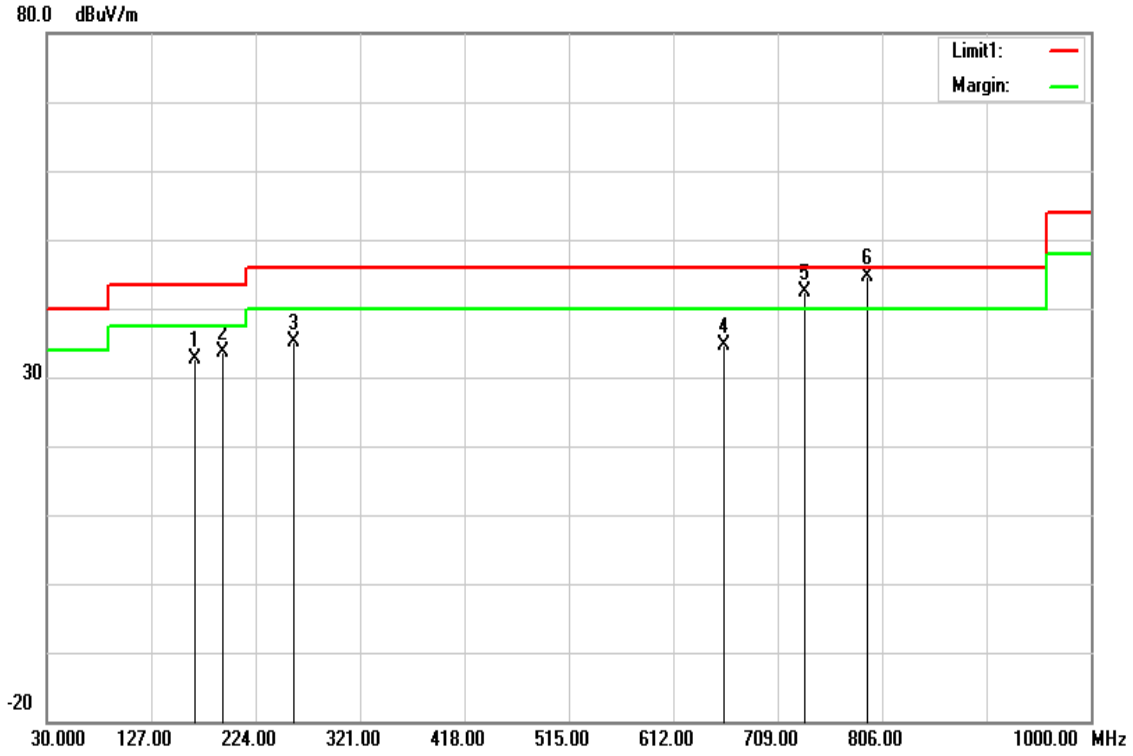
## Below 1G Test Data

| Test Mode | Mode 1 | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | 30MHz-1GHz | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Qusi-peak | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 167.7400 | 50.89 | -16.74 | 34.15 | 43.50 | -9.35 | peak |
| 257.9500 | 47.25 | -15.69 | 31.56 | 46.00 | -14.44 | peak |
| 452.9200 | 39.27 | -10.13 | 29.14 | 46.00 | -16.86 | peak |
| 659.5300 | 35.78 | -6.47 | 29.31 | 46.00 | -16.69 | peak |
| 792.4200 | 36.03 | -4.56 | 31.47 | 46.00 | -14.53 | peak |
| 962.1700 | 36.63 | -2.20 | 34.43 | 54.00 | -19.57 | peak |

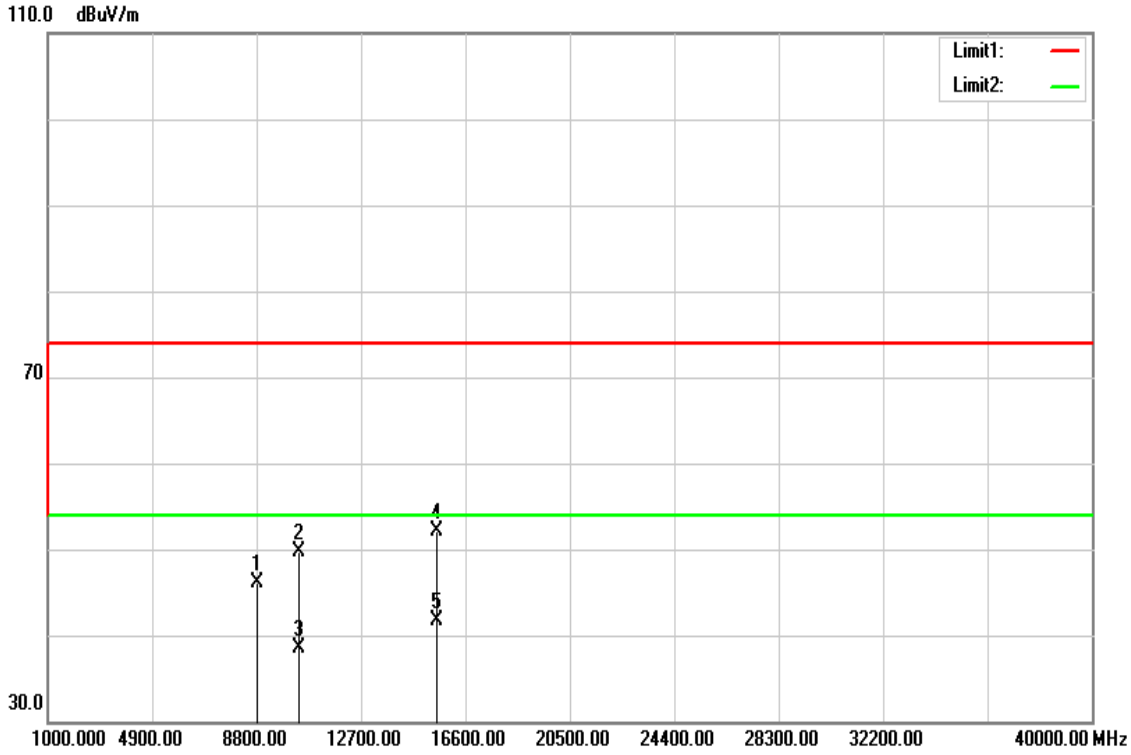
| Test Mode | Mode 1 | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | 30MHz-1GHz | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Qusi-peak | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB | Remark |
|---|---|---|---|---|---|---|
| 167.7400 | 49.25 | -16.74 | 32.51 | 43.50 | -10.99 | peak |
| 193.9300 | 49.81 | -16.09 | 33.72 | 43.50 | -9.78 | peak |
| 258.9200 | 50.85 | -15.62 | 35.23 | 46.00 | -10.77 | peak |
| 659.5300 | 41.04 | -6.47 | 34.57 | 46.00 | -11.43 | peak |
| 734.2200 | 47.64 | -5.28 | 42.36 | 46.00 | -3.64 | QP |
| 792.4200 | 49.10 | -4.56 | 44.54 | 46.00 | -1.46 | QP |

## Above 1G Test Data for UNII-1

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

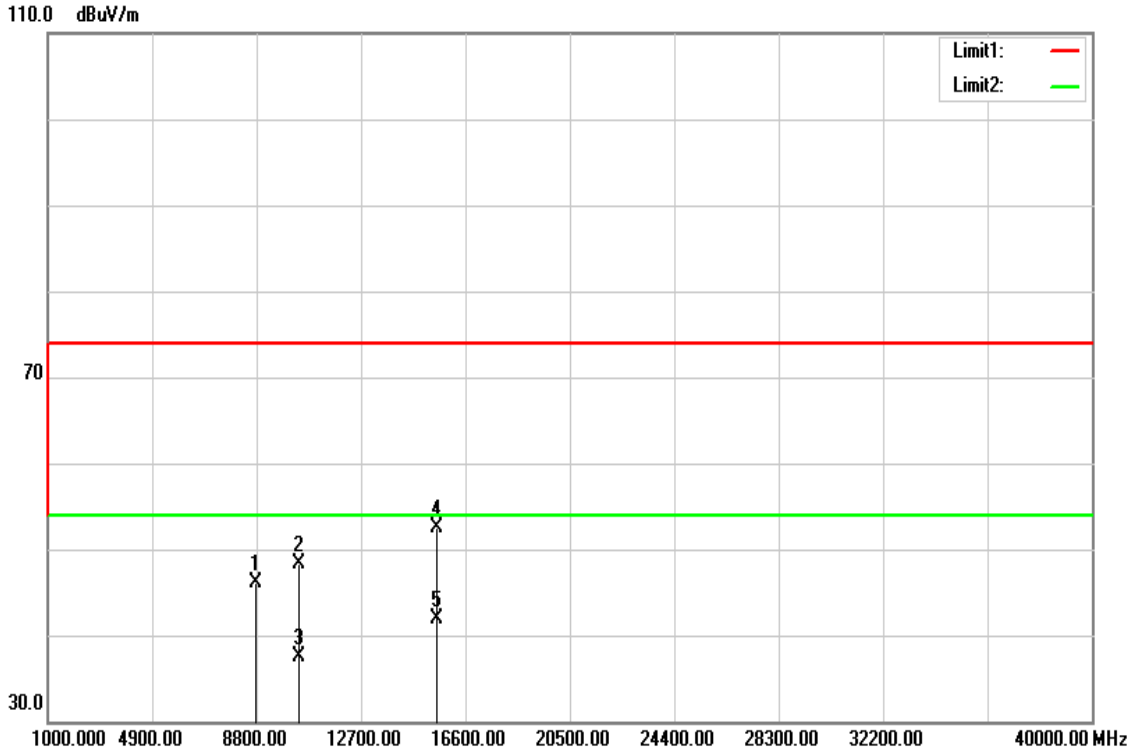



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8820.000 | 32.38 | 13.79 | 46.17 | 74.00 | -27.83 | peak |
| 10360.000 | 33.27 | 16.52 | 49.79 | 74.00 | -24.21 | peak |
| 10360.000 | 22.02 | 16.52 | 38.54 | 54.00 | -15.46 | AVG |
| 15540.000 | 33.04 | 19.04 | 52.08 | 74.00 | -21.92 | peak |
| 15540.000 | 22.59 | 19.04 | 41.63 | 54.00 | -12.37 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

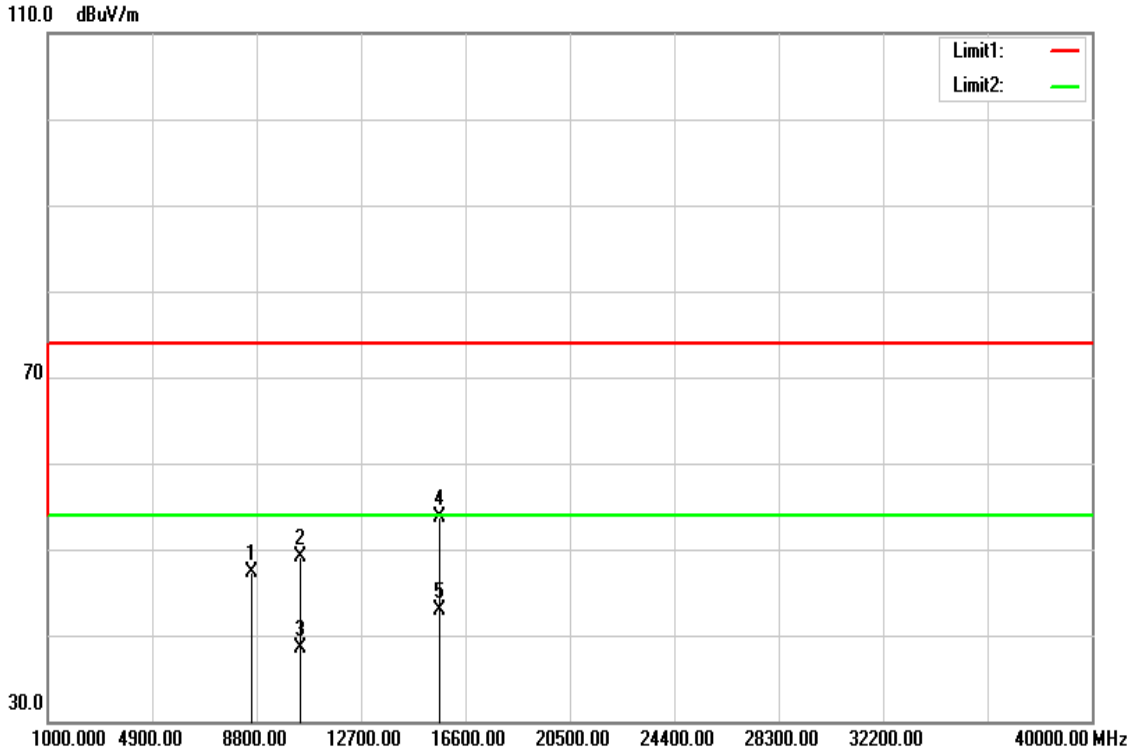



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.27 | 13.75 | 46.02 | 74.00 | -27.98 | peak |
| 10360.000 | 31.68 | 16.52 | 48.20 | 74.00 | -25.80 | peak |
| 10360.000 | 21.02 | 16.52 | 37.54 | 54.00 | -16.46 | AVG |
| 15540.000 | 33.37 | 19.04 | 52.41 | 74.00 | -21.59 | peak |
| 15540.000 | 22.92 | 19.04 | 41.96 | 54.00 | -12.04 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

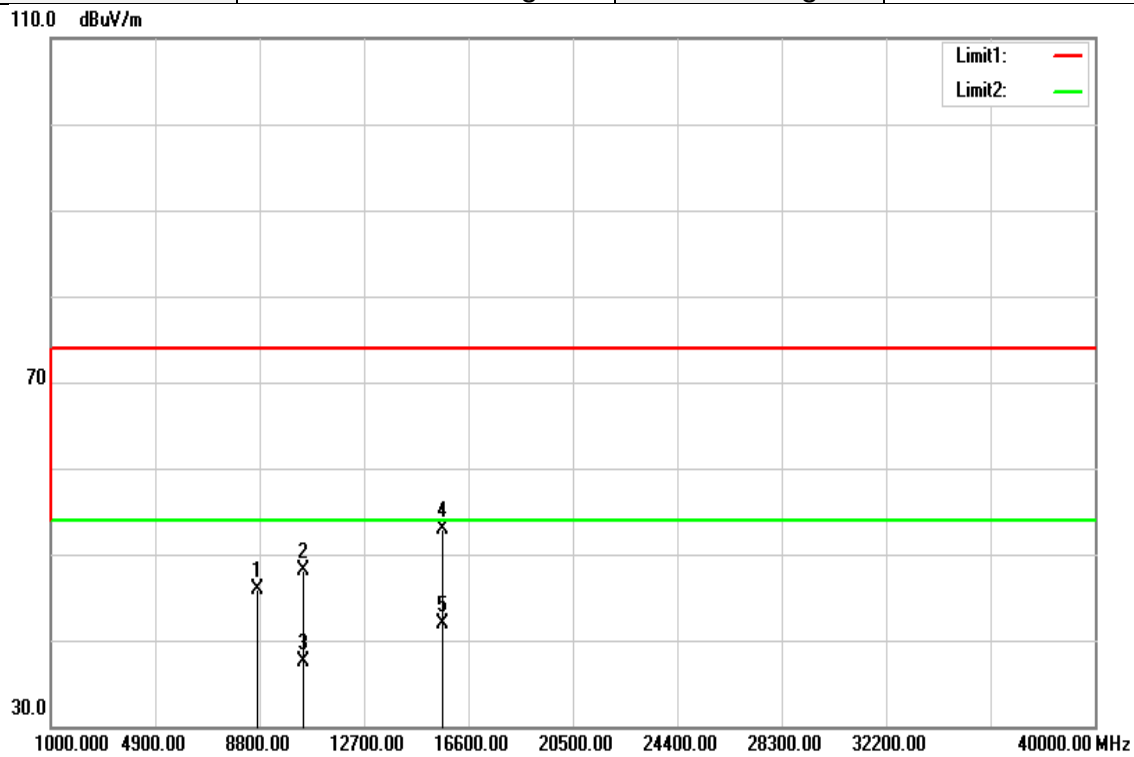



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8630.000 | 33.57 | 13.70 | 47.27 | 74.00 | -26.73 | peak |
| 10440.000 | 32.16 | 16.89 | 49.05 | 74.00 | -24.95 | peak |
| 10440.000 | 21.59 | 16.89 | 38.48 | 54.00 | -15.52 | AVG |
| 15660.000 | 34.66 | 19.14 | 53.80 | 74.00 | -20.20 | peak |
| 15660.000 | 23.85 | 19.14 | 42.99 | 54.00 | -11.01 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

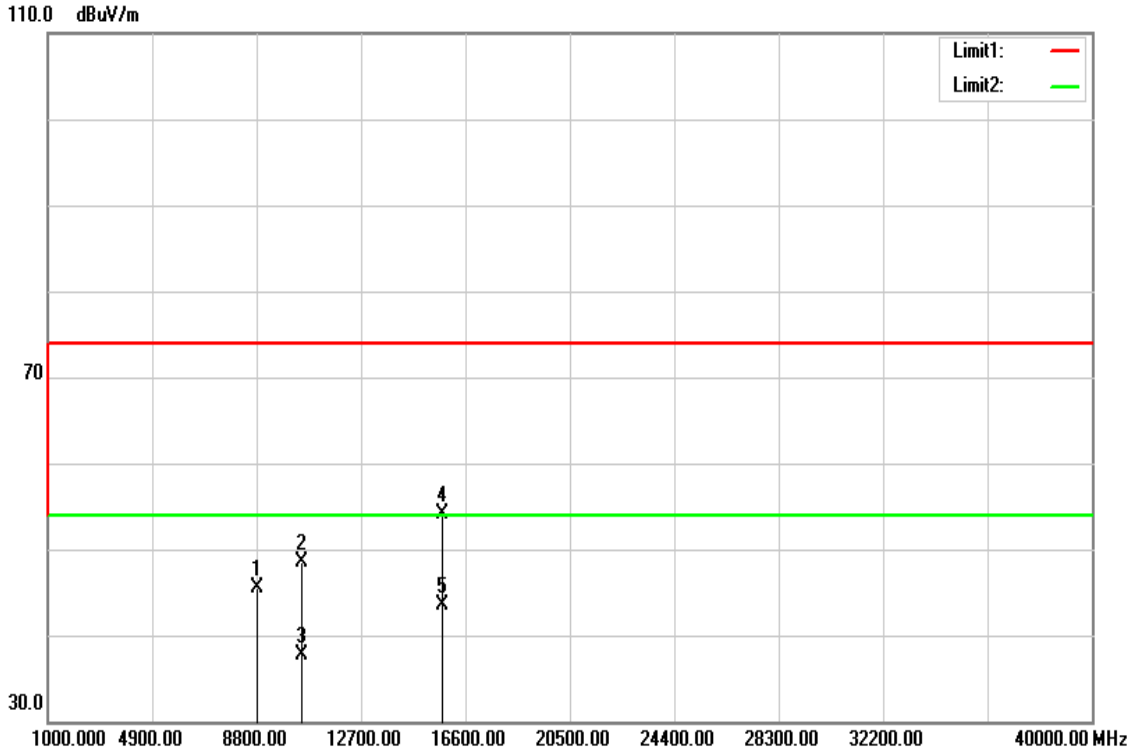



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8740.000 | 32.23 | 13.75 | 45.98 | 74.00 | -28.02 | peak |
| 10440.000 | 31.26 | 16.89 | 48.15 | 74.00 | -25.85 | peak |
| 10440.000 | 20.66 | 16.89 | 37.55 | 54.00 | -16.45 | AVG |
| 15660.000 | 33.74 | 19.14 | 52.88 | 74.00 | -21.12 | peak |
| 15660.000 | 22.80 | 19.14 | 41.94 | 54.00 | -12.06 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

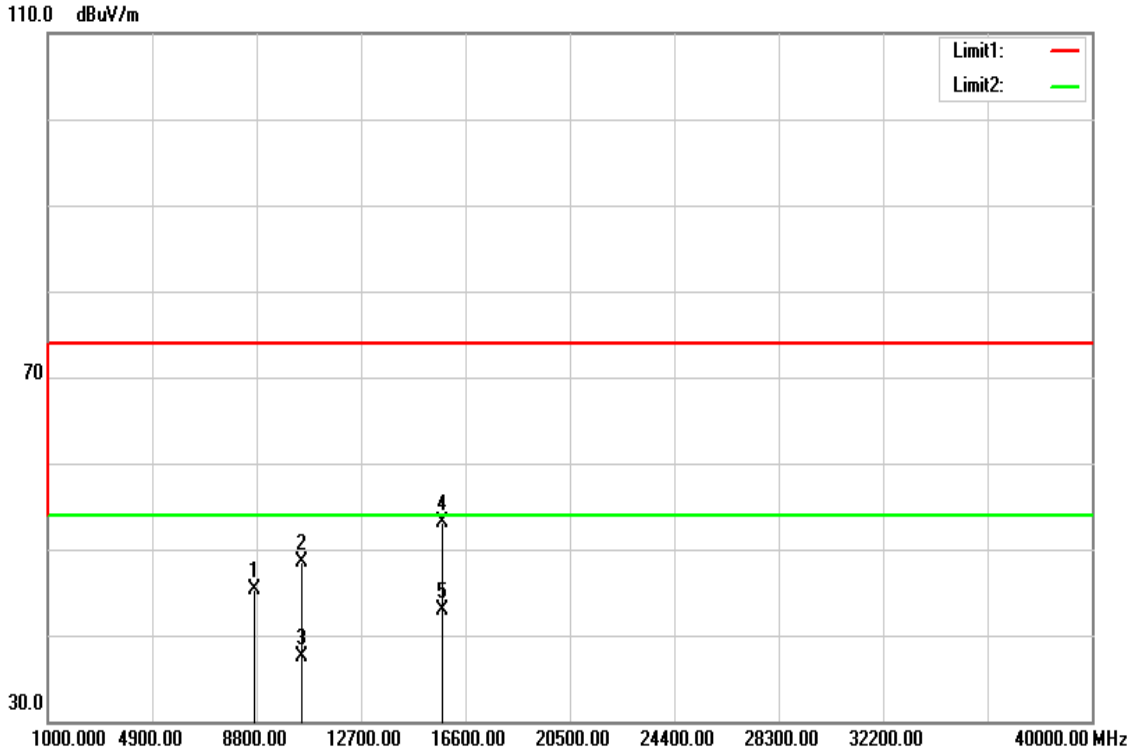



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8820.000 | 31.65 | 13.79 | 45.44 | 74.00 | -28.56 | peak |
| 10480.000 | 31.44 | 17.07 | 48.51 | 74.00 | -25.49 | peak |
| 10480.000 | 20.56 | 17.07 | 37.63 | 54.00 | -16.37 | AVG |
| 15720.000 | 34.82 | 19.19 | 54.01 | 74.00 | -19.99 | peak |
| 15720.000 | 24.35 | 19.19 | 43.54 | 54.00 | -10.46 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

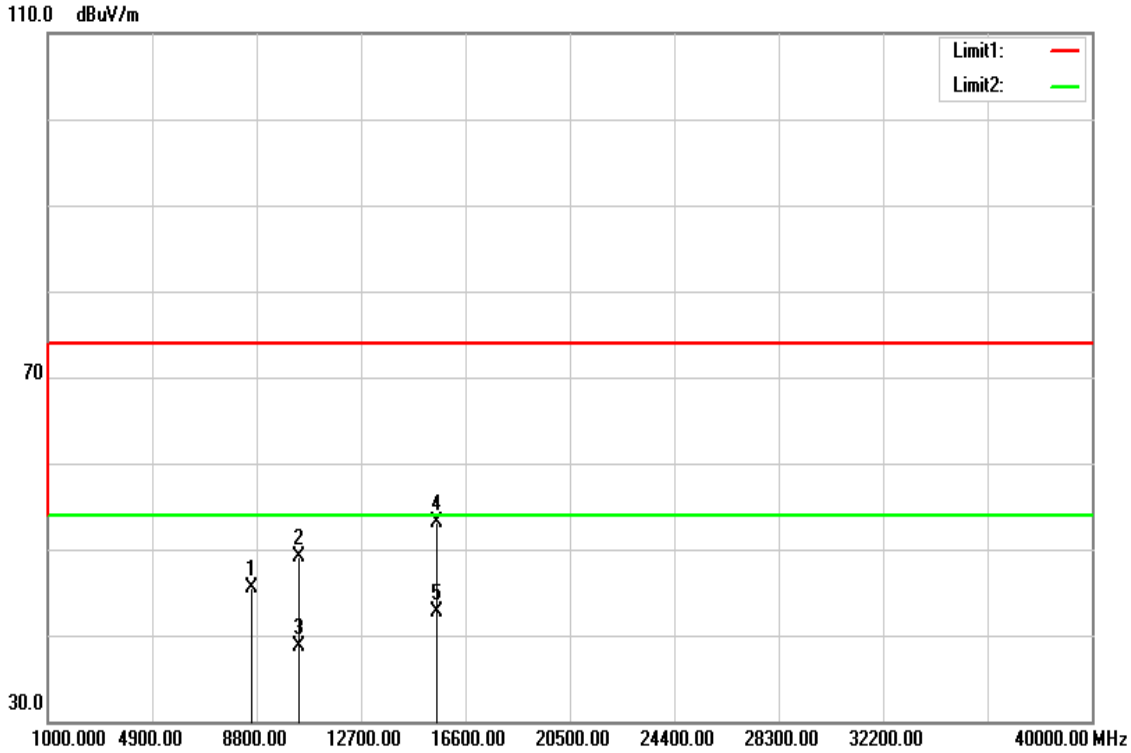



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8740.000 | 31.60 | 13.75 | 45.35 | 74.00 | -28.65 | peak |
| 10480.000 | 31.39 | 17.07 | 48.46 | 74.00 | -25.54 | peak |
| 10480.000 | 20.45 | 17.07 | 37.52 | 54.00 | -16.48 | AVG |
| 15720.000 | 33.84 | 19.19 | 53.03 | 74.00 | -20.97 | peak |
| 15720.000 | 23.68 | 19.19 | 42.87 | 54.00 | -11.13 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

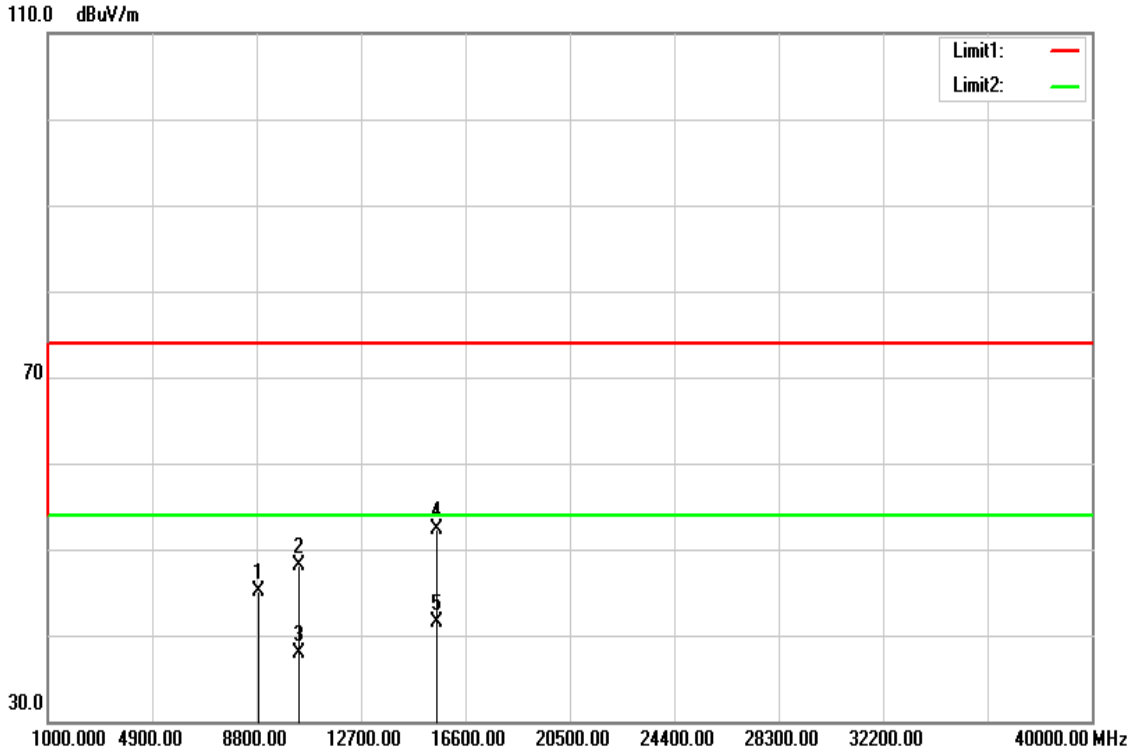



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8630.000 | 31.81 | 13.70 | 45.51 | 74.00 | -28.49 | peak |
| 10360.000 | 32.62 | 16.52 | 49.14 | 74.00 | -24.86 | peak |
| 10360.000 | 22.22 | 16.52 | 38.74 | 54.00 | -15.26 | AVG |
| 15540.000 | 34.05 | 19.04 | 53.09 | 74.00 | -20.91 | peak |
| 15540.000 | 23.61 | 19.04 | 42.65 | 54.00 | -11.35 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

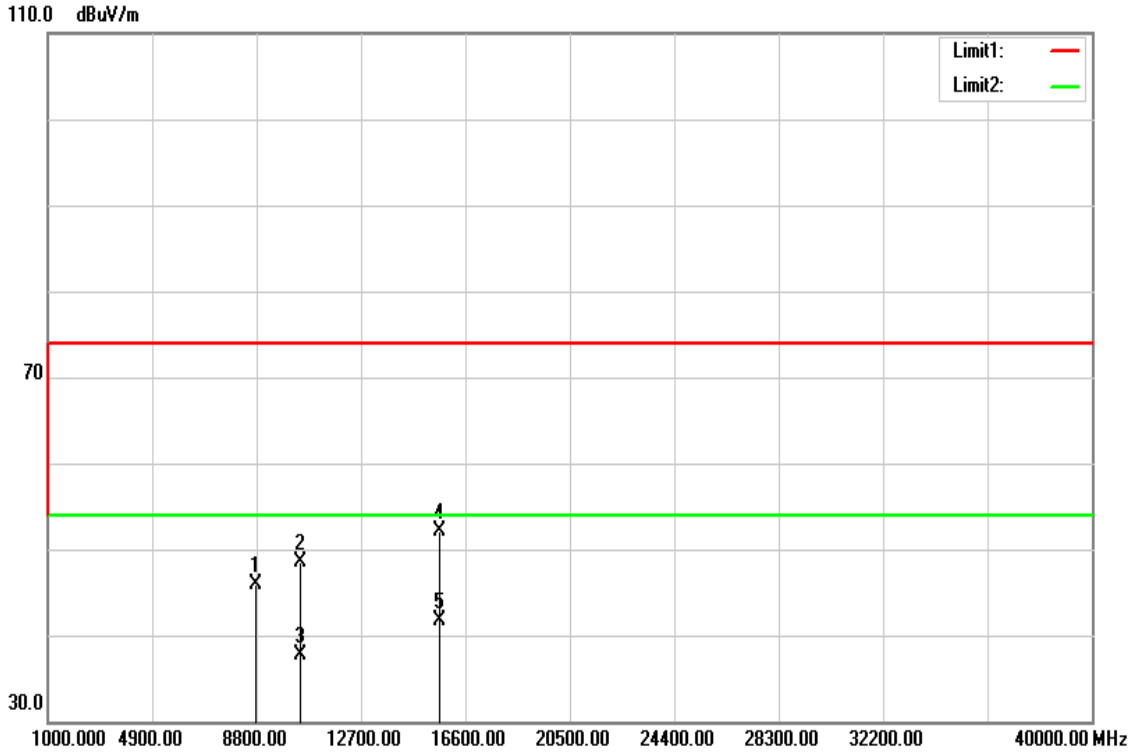



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8870.000 | 31.31 | 13.81 | 45.12 | 74.00 | -28.88 | peak |
| 10360.000 | 31.59 | 16.52 | 48.11 | 74.00 | -25.89 | peak |
| 10360.000 | 21.31 | 16.52 | 37.83 | 54.00 | -16.17 | AVG |
| 15540.000 | 33.22 | 19.04 | 52.26 | 74.00 | -21.74 | peak |
| 15540.000 | 22.43 | 19.04 | 41.47 | 54.00 | -12.53 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

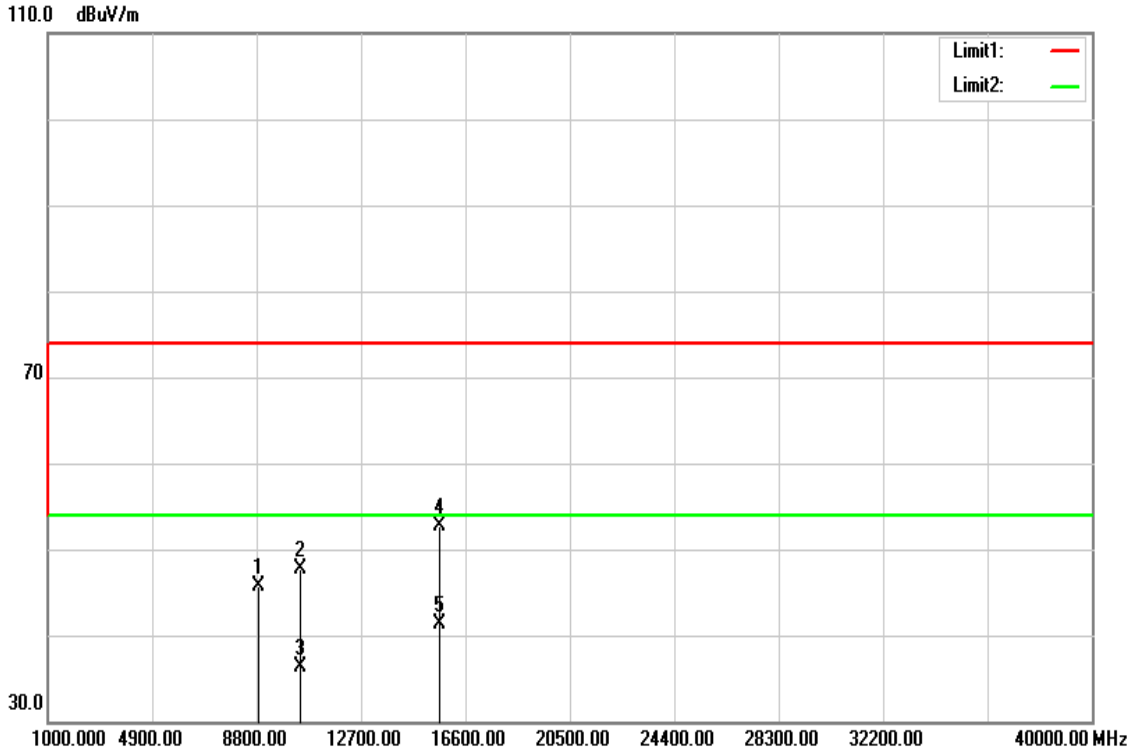



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.08 | 13.75 | 45.83 | 74.00 | -28.17 | peak |
| 10440.000 | 31.70 | 16.89 | 48.59 | 74.00 | -25.41 | peak |
| 10440.000 | 20.75 | 16.89 | 37.64 | 54.00 | -16.36 | AVG |
| 15660.000 | 32.95 | 19.14 | 52.09 | 74.00 | -21.91 | peak |
| 15660.000 | 22.65 | 19.14 | 41.79 | 54.00 | -12.21 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

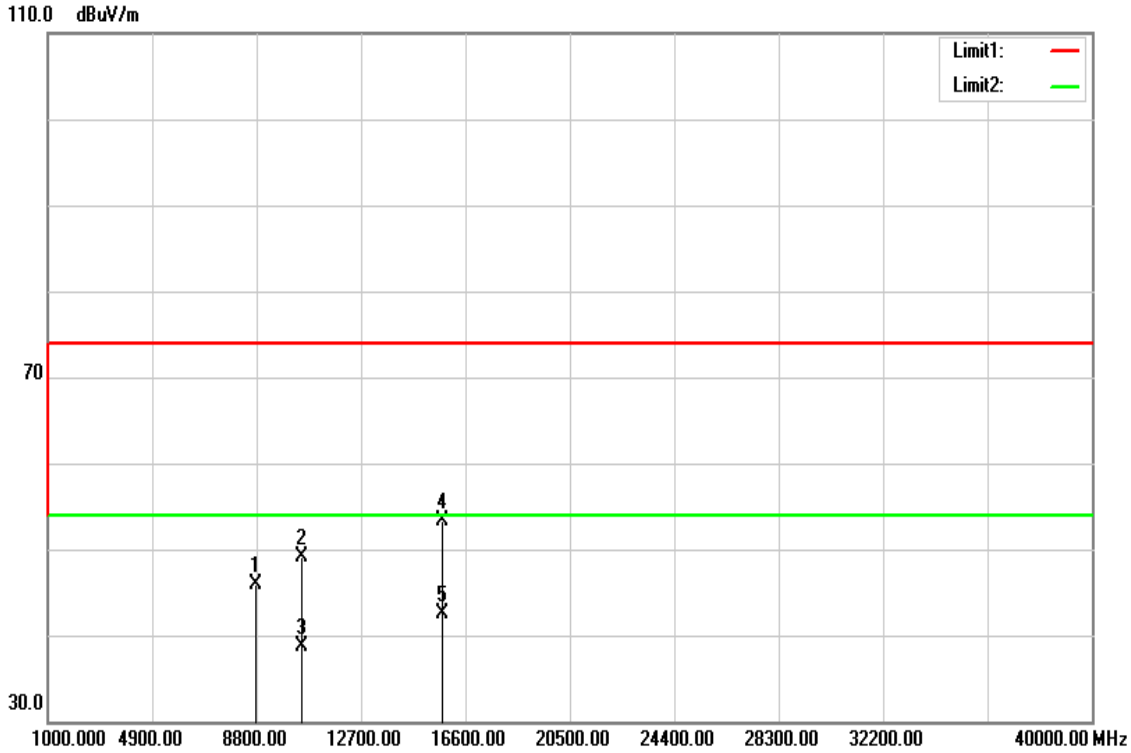



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8860.000 | 31.95 | 13.81 | 45.76 | 74.00 | -28.24 | peak |
| 10440.000 | 30.81 | 16.89 | 47.70 | 74.00 | -26.30 | peak |
| 10440.000 | 19.35 | 16.89 | 36.24 | 54.00 | -17.76 | AVG |
| 15660.000 | 33.58 | 19.14 | 52.72 | 74.00 | -21.28 | peak |
| 15660.000 | 22.25 | 19.14 | 41.39 | 54.00 | -12.61 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

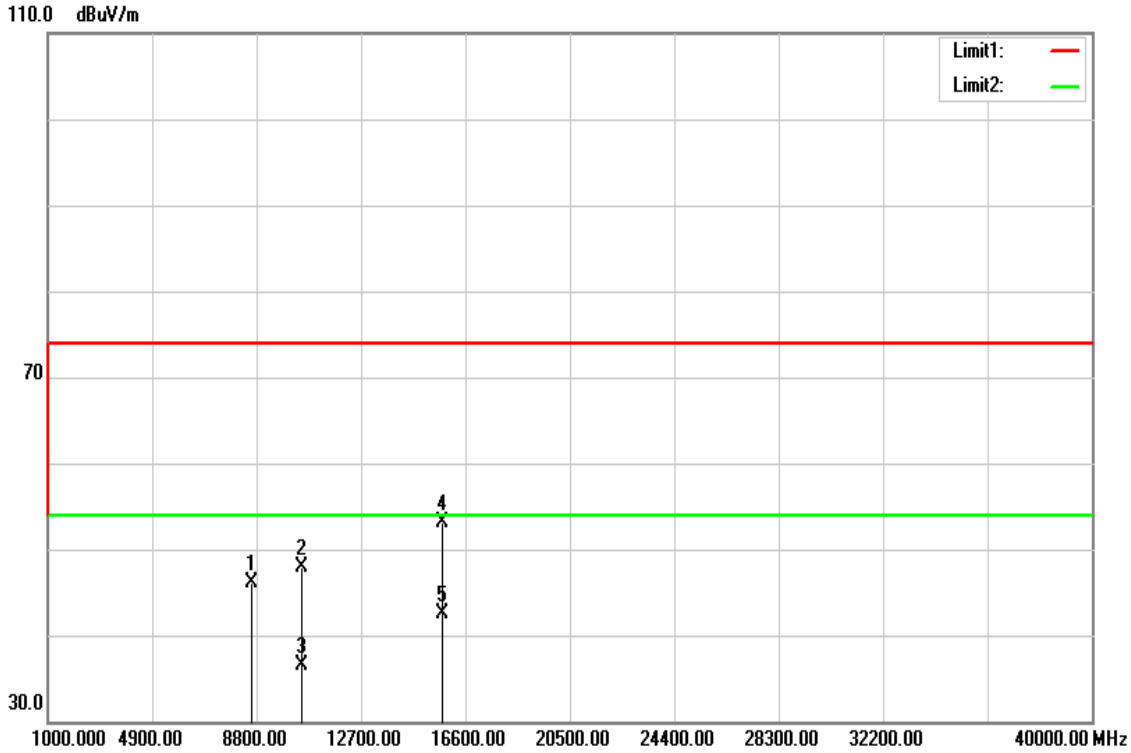



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8760.000 | 32.15 | 13.76 | 45.91 | 74.00 | -28.09 | peak |
| 10480.000 | 32.01 | 17.07 | 49.08 | 74.00 | -24.92 | peak |
| 10480.000 | 21.67 | 17.07 | 38.74 | 54.00 | -15.26 | AVG |
| 15720.000 | 34.20 | 19.19 | 53.39 | 74.00 | -20.61 | peak |
| 15720.000 | 23.40 | 19.19 | 42.59 | 54.00 | -11.41 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

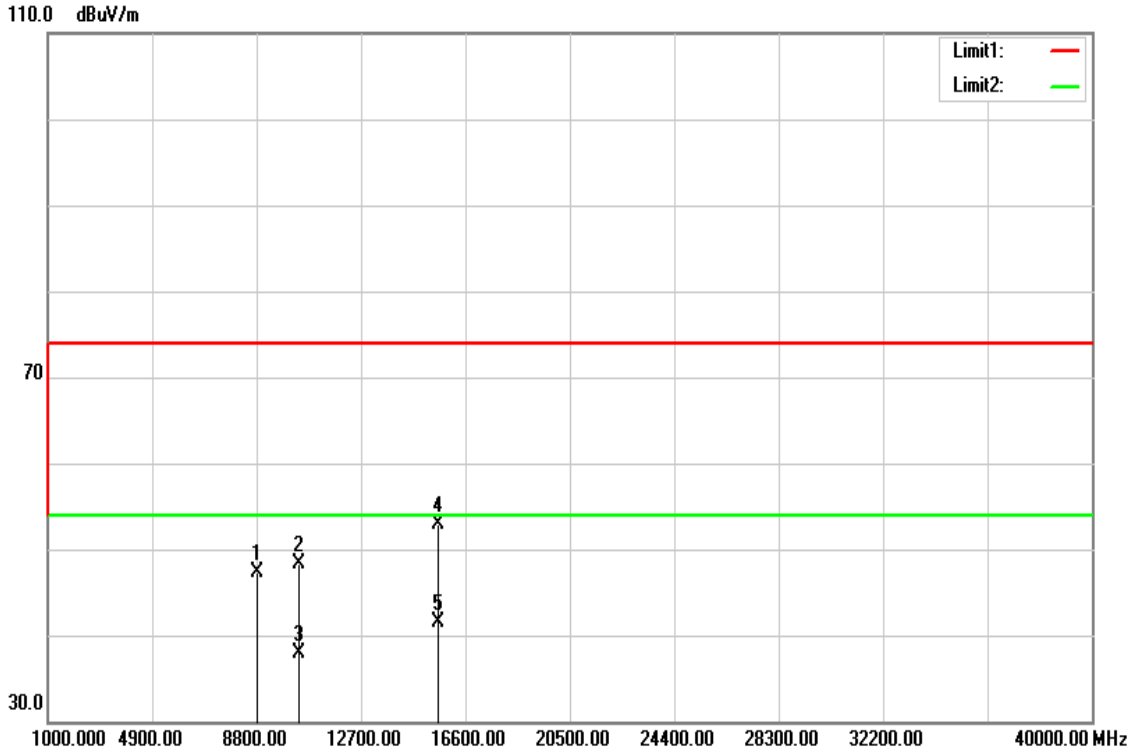



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8640.000 | 32.42 | 13.70 | 46.12 | 74.00 | -27.88 | peak |
| 10480.000 | 30.86 | 17.07 | 47.93 | 74.00 | -26.07 | peak |
| 10480.000 | 19.51 | 17.07 | 36.58 | 54.00 | -17.42 | AVG |
| 15720.000 | 33.82 | 19.19 | 53.01 | 74.00 | -20.99 | peak |
| 15720.000 | 23.26 | 19.19 | 42.45 | 54.00 | -11.55 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

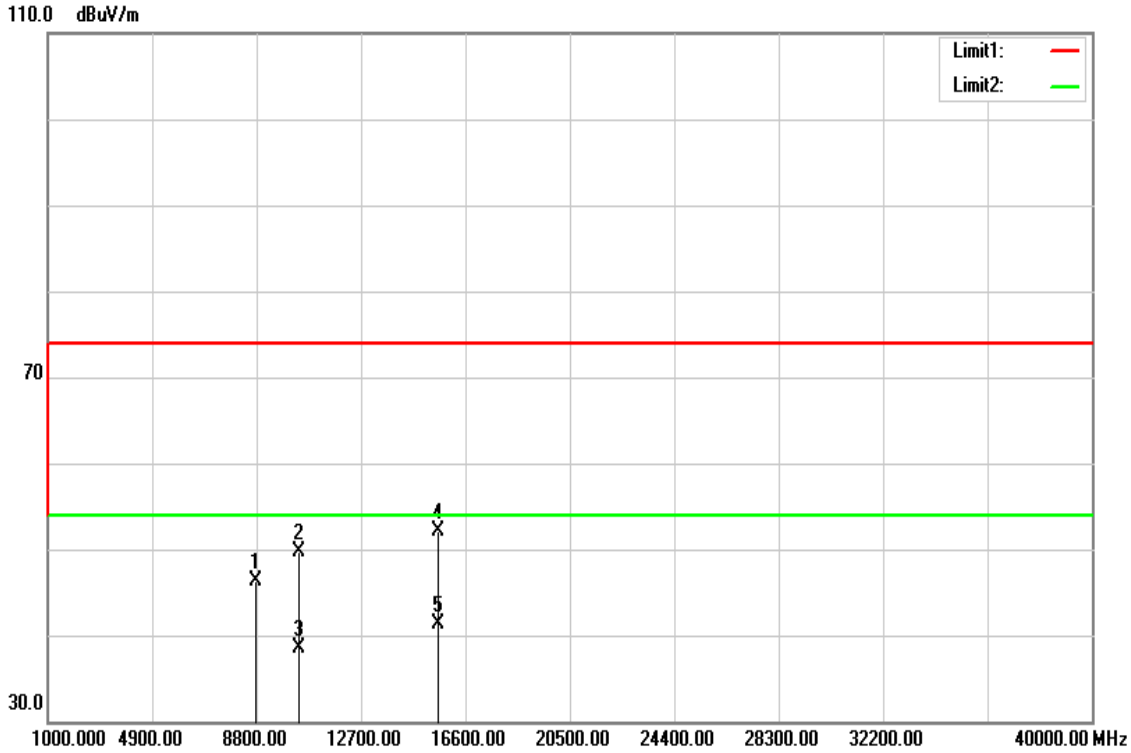



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8830.000 | 33.61 | 13.79 | 47.40 | 74.00 | -26.60 | peak |
| 10380.000 | 31.72 | 16.62 | 48.34 | 74.00 | -25.66 | peak |
| 10380.000 | 21.30 | 16.62 | 37.92 | 54.00 | -16.08 | AVG |
| 15570.000 | 33.79 | 19.07 | 52.86 | 74.00 | -21.14 | peak |
| 15570.000 | 22.40 | 19.07 | 41.47 | 54.00 | -12.53 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

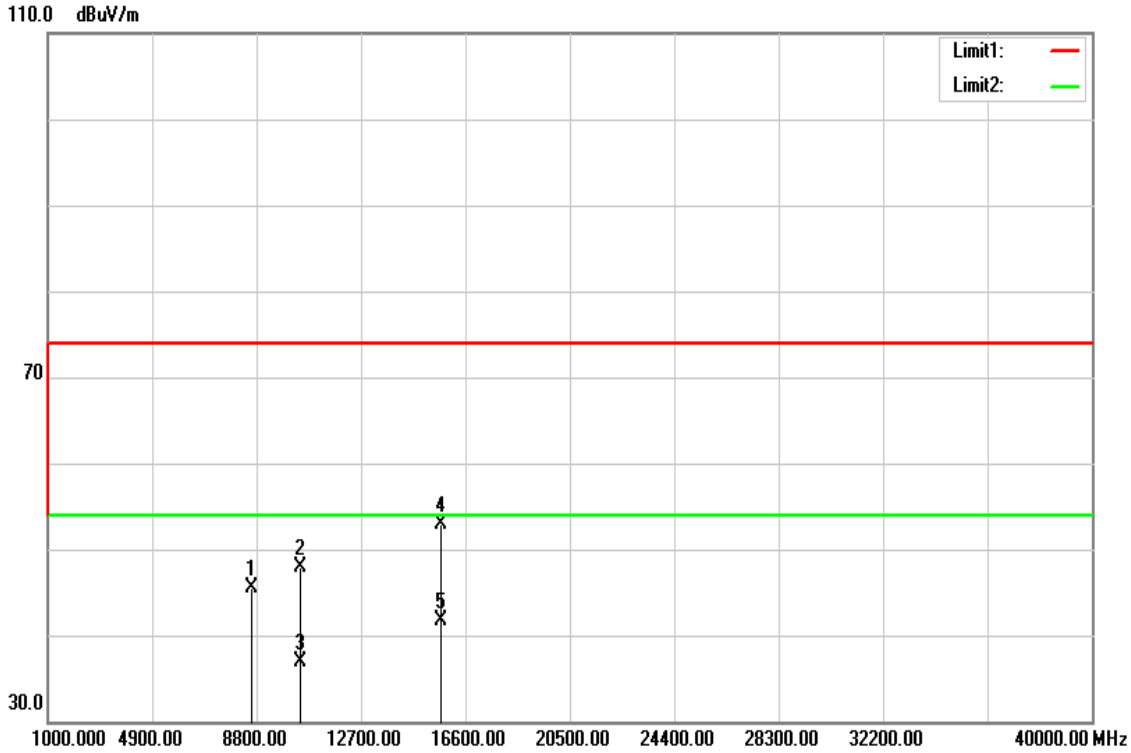



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.59 | 13.75 | 46.34 | 74.00 | -27.66 | peak |
| 10380.000 | 33.00 | 16.62 | 49.62 | 74.00 | -24.38 | peak |
| 10380.000 | 21.85 | 16.62 | 38.47 | 54.00 | -15.53 | AVG |
| 15570.000 | 33.11 | 19.07 | 52.18 | 74.00 | -21.82 | peak |
| 15570.000 | 22.22 | 19.07 | 41.29 | 54.00 | -12.71 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

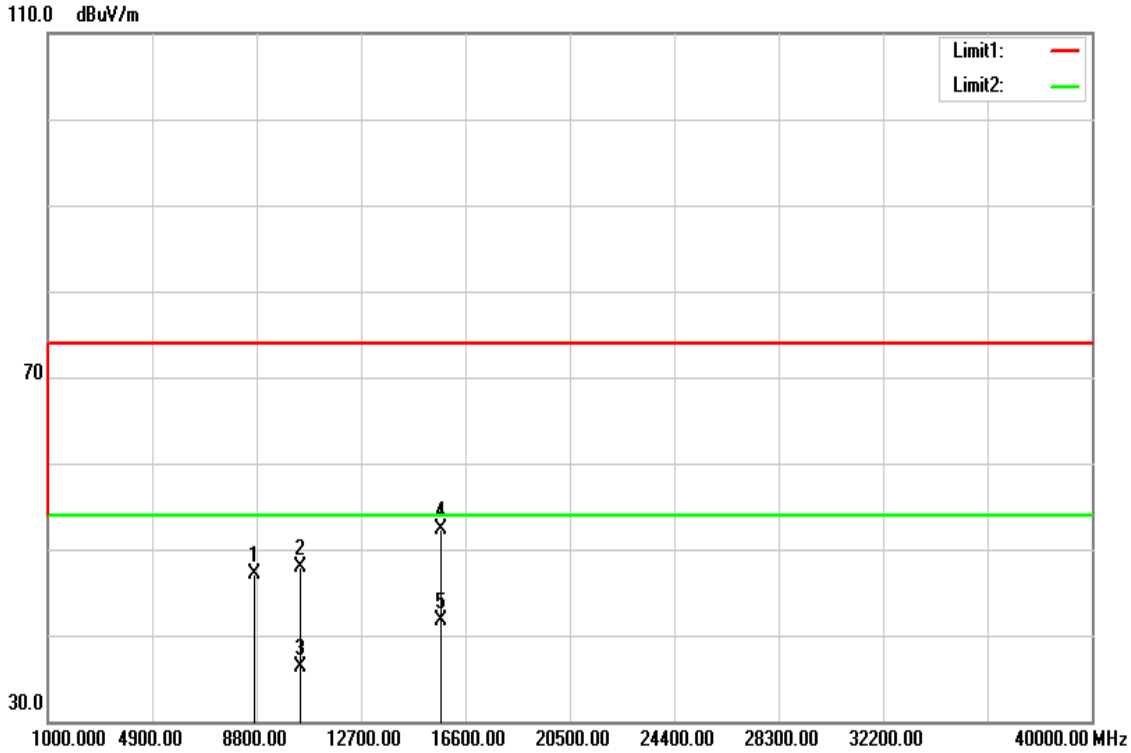



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8630.000 | 31.72 | 13.70 | 45.42 | 74.00 | -28.58 | peak |
| 10460.000 | 30.97 | 16.98 | 47.95 | 74.00 | -26.05 | peak |
| 10460.000 | 19.90 | 16.98 | 36.88 | 54.00 | -17.12 | AVG |
| 15690.000 | 33.76 | 19.17 | 52.93 | 74.00 | -21.07 | peak |
| 15690.000 | 22.59 | 19.17 | 41.76 | 54.00 | -12.24 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

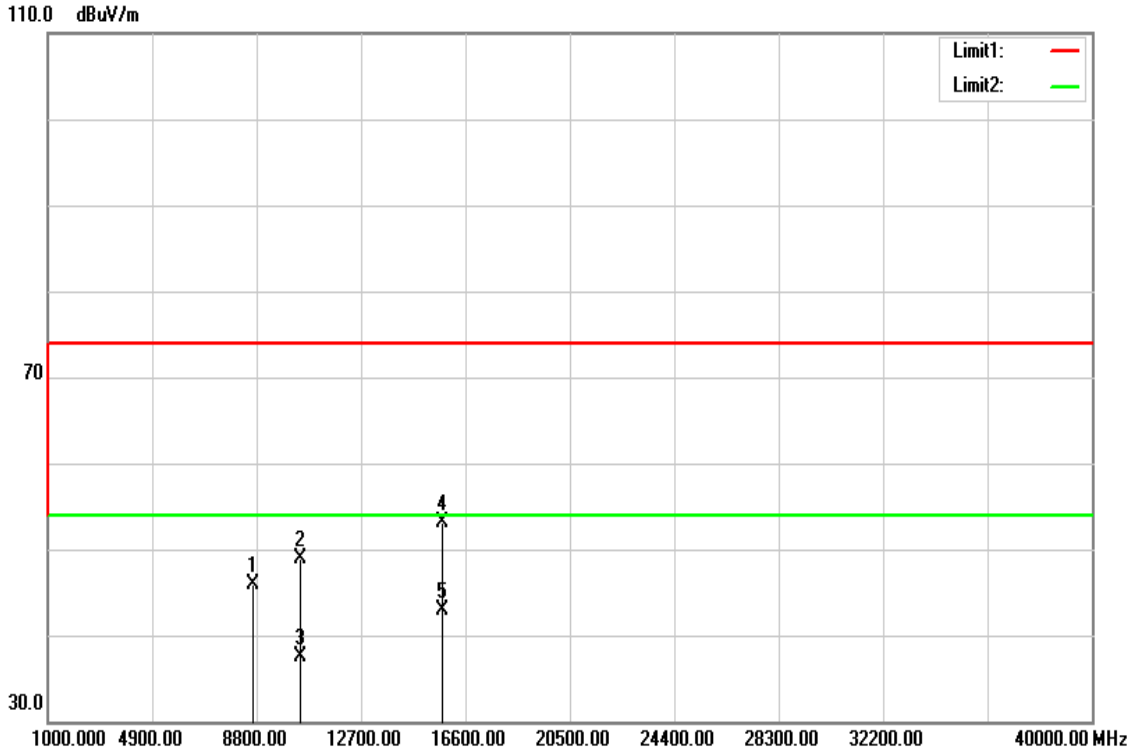



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8740.000 | 33.43 | 13.75 | 47.18 | 74.00 | -26.82 | peak |
| 10460.000 | 30.86 | 16.98 | 47.84 | 74.00 | -26.16 | peak |
| 10460.000 | 19.29 | 16.98 | 36.27 | 54.00 | -17.73 | AVG |
| 15690.000 | 33.08 | 19.17 | 52.25 | 74.00 | -21.75 | peak |
| 15690.000 | 22.52 | 19.17 | 41.69 | 54.00 | -12.31 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

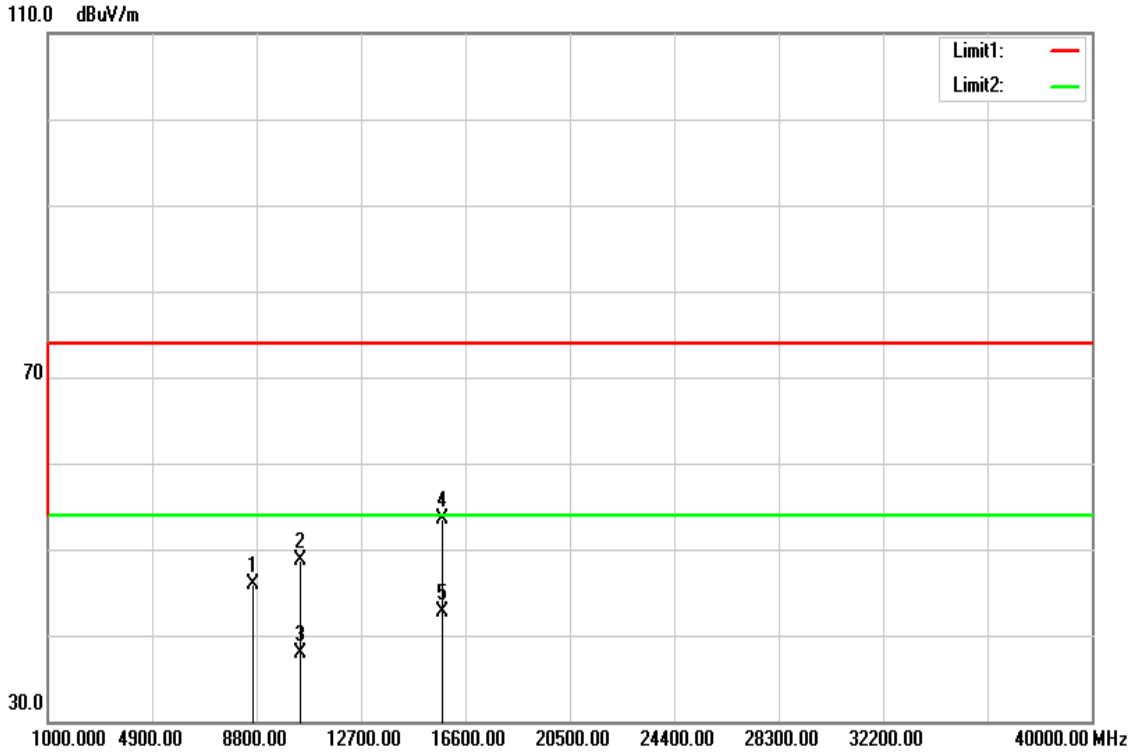



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8650.000 | 32.26 | 13.71 | 45.97 | 74.00 | -28.03 | peak |
| 10420.000 | 32.05 | 16.80 | 48.85 | 74.00 | -25.15 | peak |
| 10420.000 | 20.75 | 16.80 | 37.55 | 54.00 | -16.45 | AVG |
| 15720.000 | 33.89 | 19.19 | 53.08 | 74.00 | -20.92 | peak |
| 15720.000 | 23.79 | 19.19 | 42.98 | 54.00 | -11.02 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |



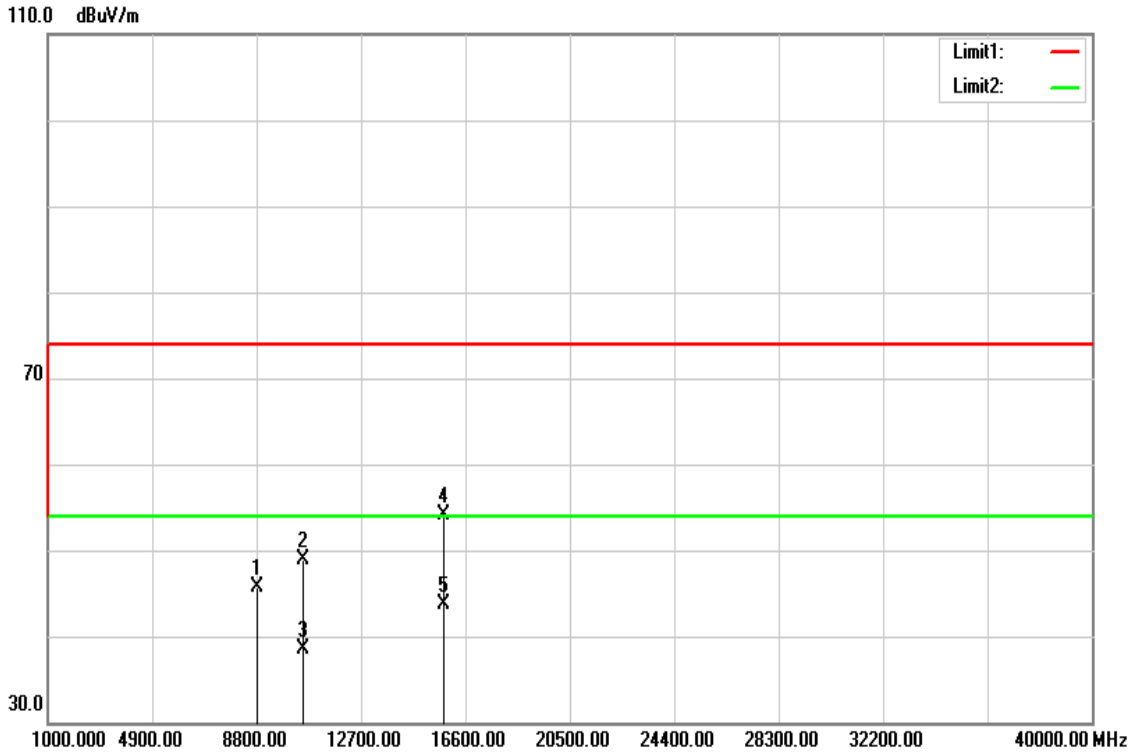

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8690.000 | 32.25 | 13.73 | 45.98 | 74.00 | -28.02 | peak |
| 10420.000 | 31.87 | 16.80 | 48.67 | 74.00 | -25.33 | peak |
| 10420.000 | 21.04 | 16.80 | 37.84 | 54.00 | -16.16 | AVG |
| 15720.000 | 34.29 | 19.19 | 53.48 | 74.00 | -20.52 | peak |
| 15720.000 | 23.44 | 19.19 | 42.63 | 54.00 | -11.37 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

## Above 1G Test Data for UNII-2a

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

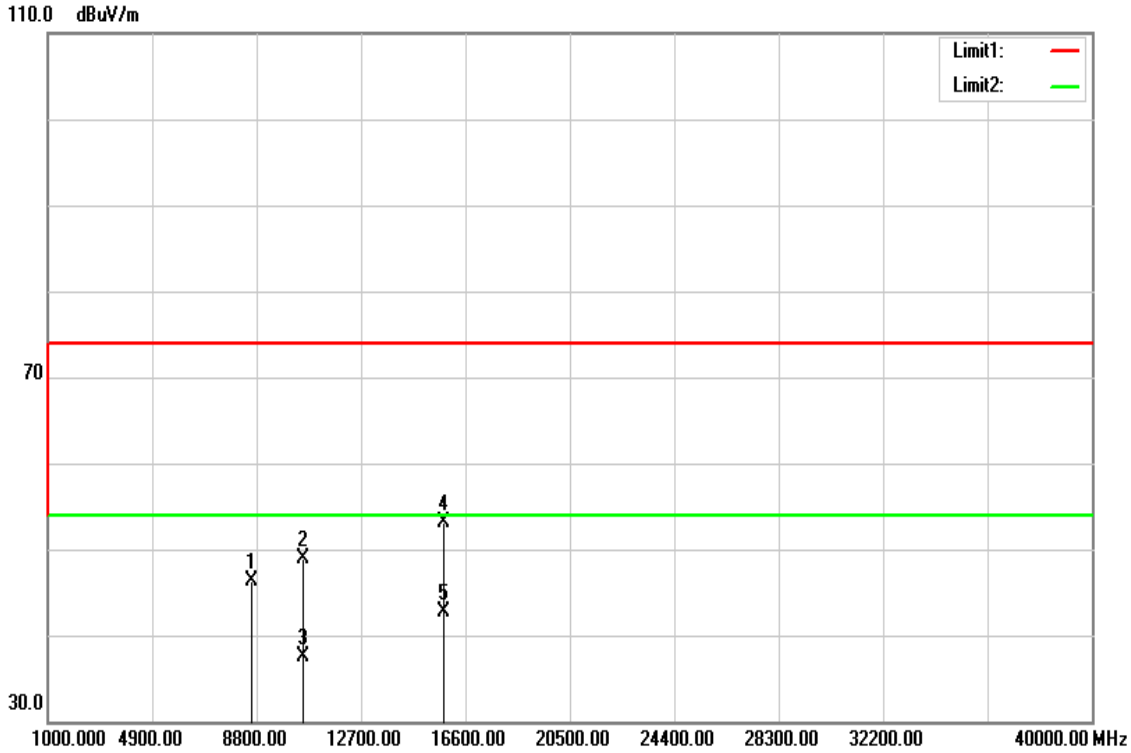



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8840.000 | 31.93 | 13.80 | 45.73 | 74.00 | -28.27 | peak |
| 10520.000 | 31.86 | 17.14 | 49.00 | 74.00 | -25.00 | peak |
| 10520.000 | 21.41 | 17.14 | 38.55 | 54.00 | -15.45 | AVG |
| 15780.000 | 34.88 | 19.25 | 54.13 | 74.00 | -19.87 | peak |
| 15780.000 | 24.42 | 19.25 | 43.67 | 54.00 | -10.33 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

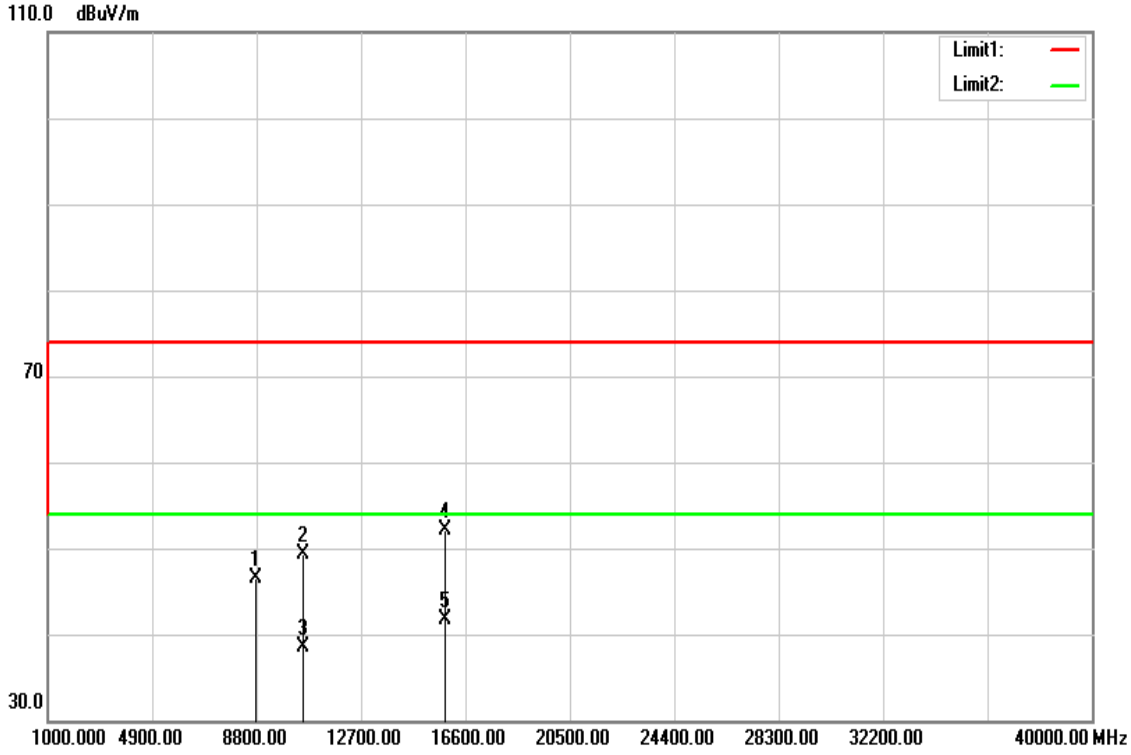



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8630.000 | 32.58 | 13.70 | 46.28 | 74.00 | -27.72 | peak |
| 10520.000 | 31.67 | 17.14 | 48.81 | 74.00 | -25.19 | peak |
| 10520.000 | 20.44 | 17.14 | 37.58 | 54.00 | -16.42 | AVG |
| 15780.000 | 33.79 | 19.25 | 53.04 | 74.00 | -20.96 | peak |
| 15780.000 | 23.39 | 19.25 | 42.64 | 54.00 | -11.36 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | |
|---|---|---|---|
| Test Item | Harmonic | Test Date | |
| Polarize | Vertical | Test Engineer | |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

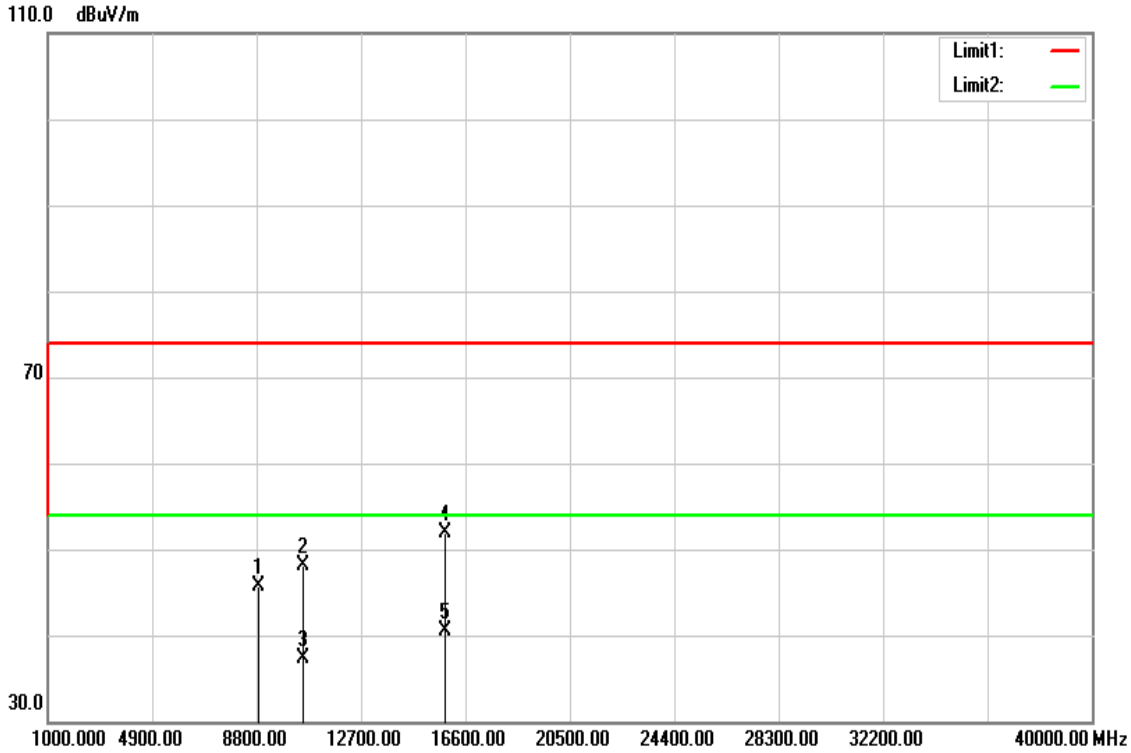



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8760.000 | 32.75 | 13.76 | 46.51 | 74.00 | -27.49 | peak |
| 10560.000 | 32.09 | 17.11 | 49.20 | 74.00 | -24.80 | peak |
| 10560.000 | 21.41 | 17.11 | 38.52 | 54.00 | -15.48 | AVG |
| 15840.000 | 32.80 | 19.30 | 52.10 | 74.00 | -21.90 | peak |
| 15840.000 | 22.37 | 19.30 | 41.67 | 54.00 | -12.33 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

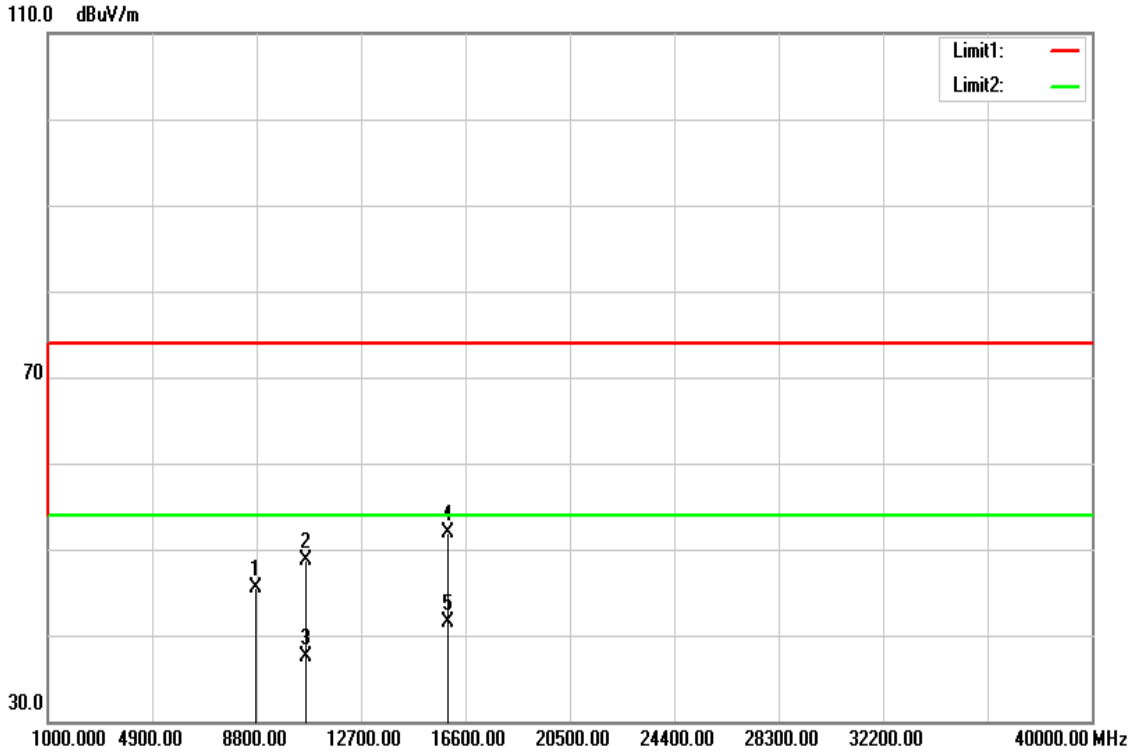



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8880.000 | 31.89 | 13.81 | 45.70 | 74.00 | -28.30 | peak |
| 10560.000 | 30.97 | 17.11 | 48.08 | 74.00 | -25.92 | peak |
| 10560.000 | 20.13 | 17.11 | 37.24 | 54.00 | -16.76 | AVG |
| 15840.000 | 32.52 | 19.30 | 51.82 | 74.00 | -22.18 | peak |
| 15840.000 | 21.27 | 19.30 | 40.57 | 54.00 | -13.43 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

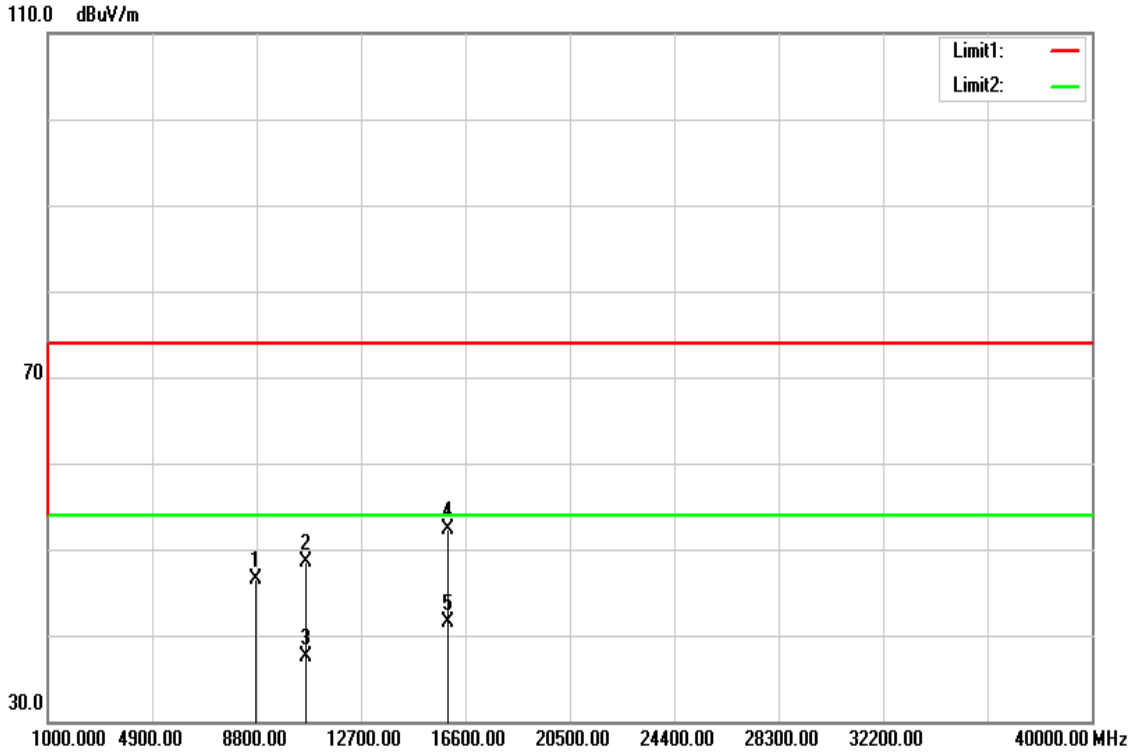



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8790.000 | 31.79 | 13.77 | 45.56 | 74.00 | -28.44 | peak |
| 10640.000 | 31.70 | 17.04 | 48.74 | 74.00 | -25.26 | peak |
| 10640.000 | 20.51 | 17.04 | 37.55 | 54.00 | -16.45 | AVG |
| 15960.000 | 32.60 | 19.40 | 52.00 | 74.00 | -22.00 | peak |
| 15960.000 | 22.07 | 19.40 | 41.47 | 54.00 | -12.53 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

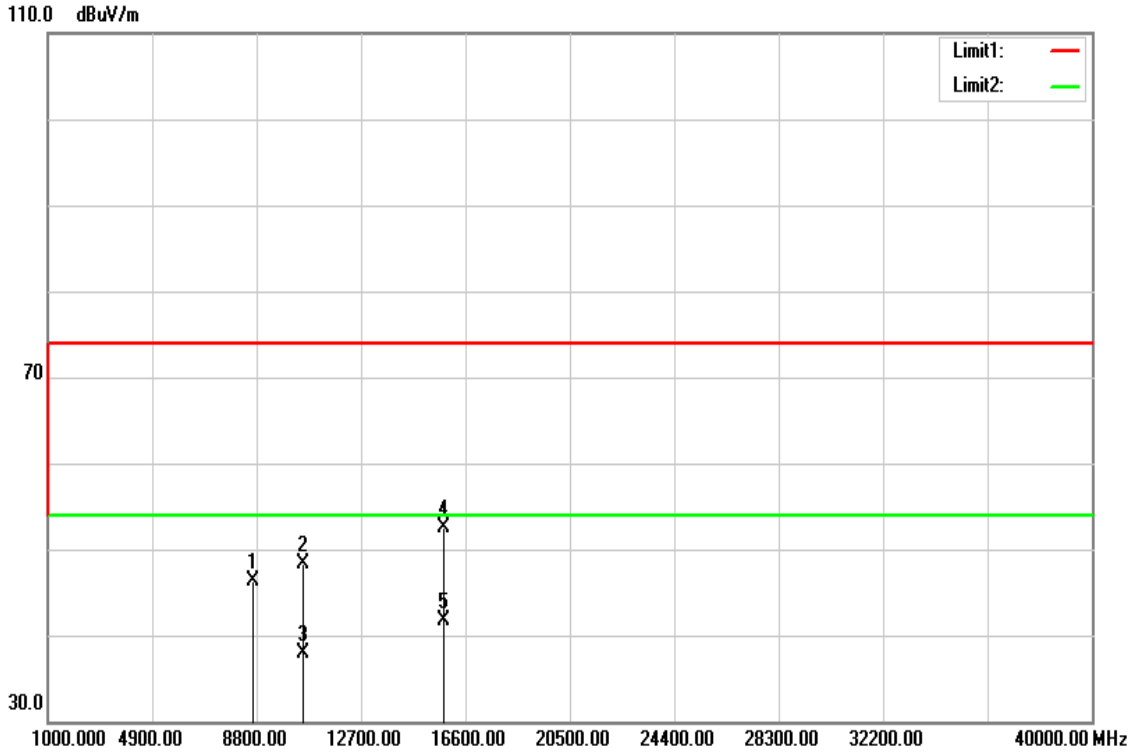



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.70 | 13.75 | 46.45 | 74.00 | -27.55 | peak |
| 10640.000 | 31.41 | 17.04 | 48.45 | 74.00 | -25.55 | peak |
| 10640.000 | 20.50 | 17.04 | 37.54 | 54.00 | -16.46 | AVG |
| 15960.000 | 32.90 | 19.40 | 52.30 | 74.00 | -21.70 | peak |
| 15960.000 | 22.07 | 19.40 | 41.47 | 54.00 | -12.53 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

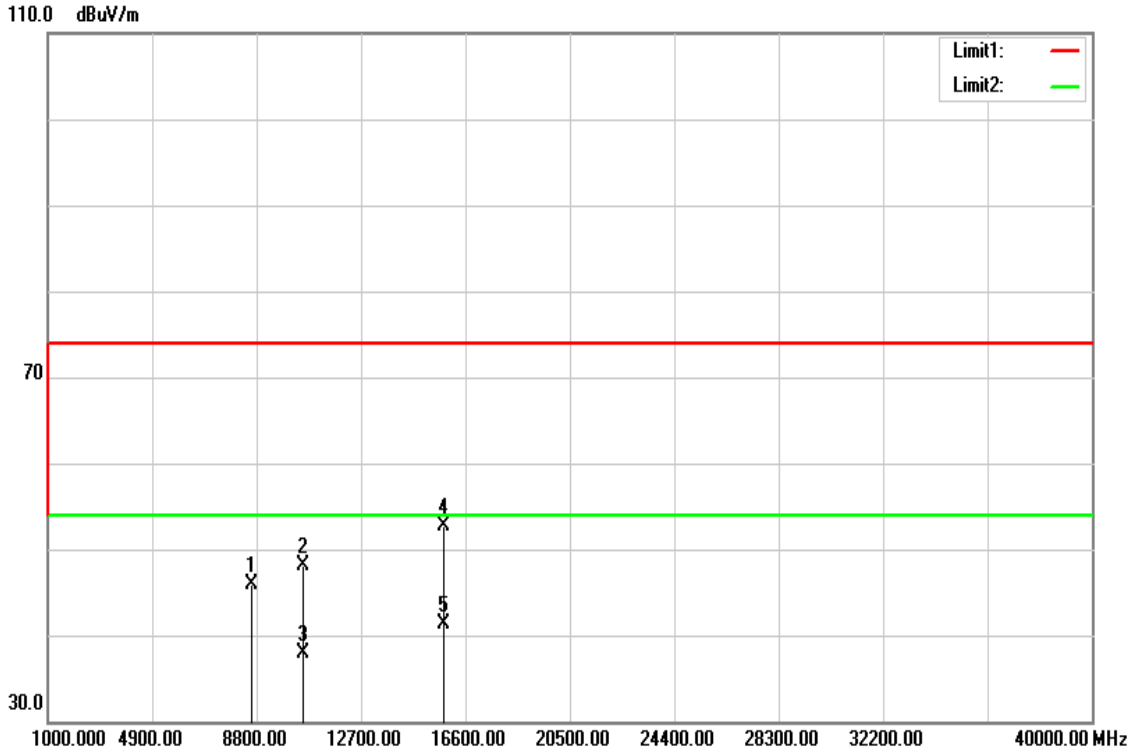



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8650.000 | 32.62 | 13.71 | 46.33 | 74.00 | -27.67 | peak |
| 10520.000 | 31.25 | 17.14 | 48.39 | 74.00 | -25.61 | peak |
| 10520.000 | 20.74 | 17.14 | 37.88 | 54.00 | -16.12 | AVG |
| 15780.000 | 33.18 | 19.25 | 52.43 | 74.00 | -21.57 | peak |
| 15780.000 | 22.39 | 19.25 | 41.64 | 54.00 | -12.36 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

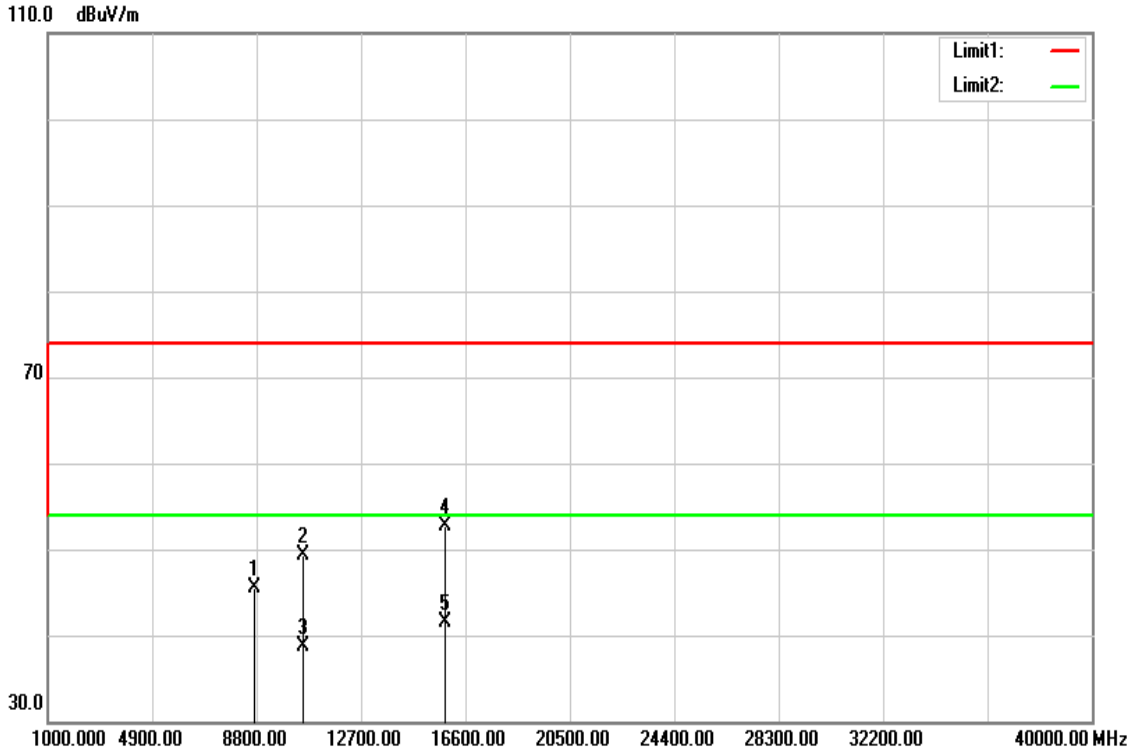



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8640.000 | 32.28 | 13.70 | 45.98 | 74.00 | -28.02 | peak |
| 10520.000 | 30.89 | 17.14 | 48.03 | 74.00 | -25.97 | peak |
| 10520.000 | 20.70 | 17.14 | 37.84 | 54.00 | -16.16 | AVG |
| 15780.000 | 33.36 | 19.25 | 52.61 | 74.00 | -21.39 | peak |
| 15780.000 | 22.08 | 19.25 | 41.33 | 54.00 | -12.67 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

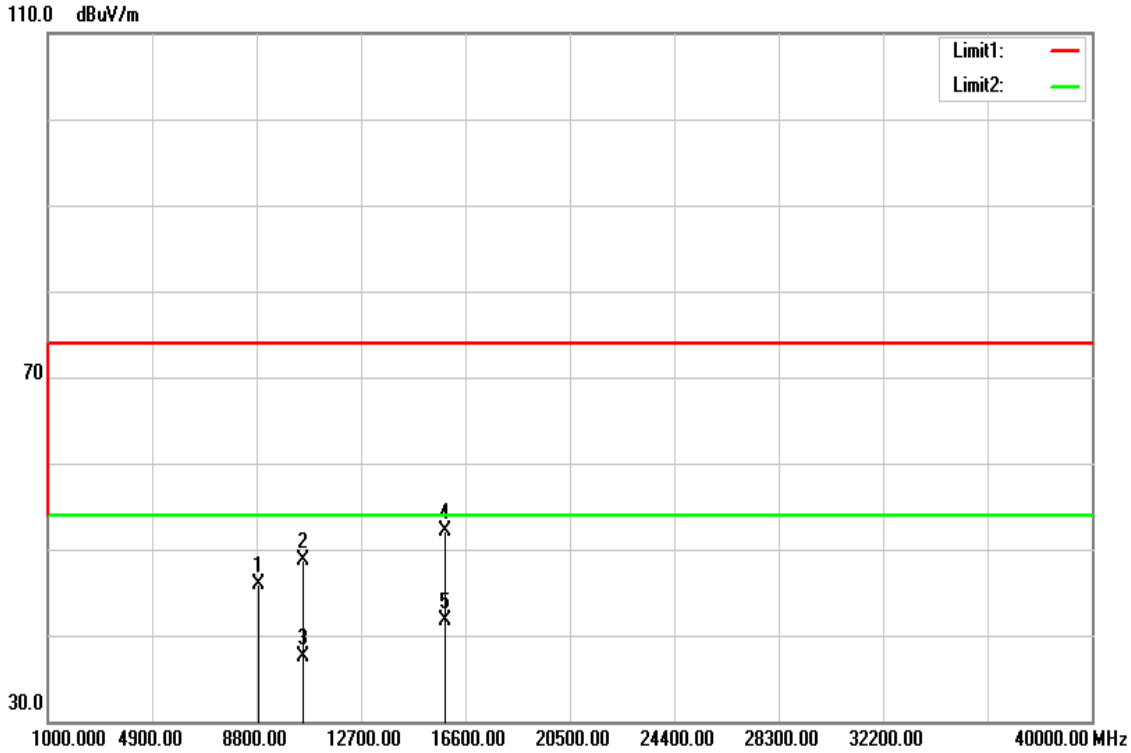



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8720.000 | 31.82 | 13.74 | 45.56 | 74.00 | -28.44 | peak |
| 10560.000 | 32.29 | 17.11 | 49.40 | 74.00 | -24.60 | peak |
| 10560.000 | 21.57 | 17.11 | 38.68 | 54.00 | -15.32 | AVG |
| 15840.000 | 33.44 | 19.30 | 52.74 | 74.00 | -21.26 | peak |
| 15840.000 | 22.22 | 19.30 | 41.52 | 54.00 | -12.48 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

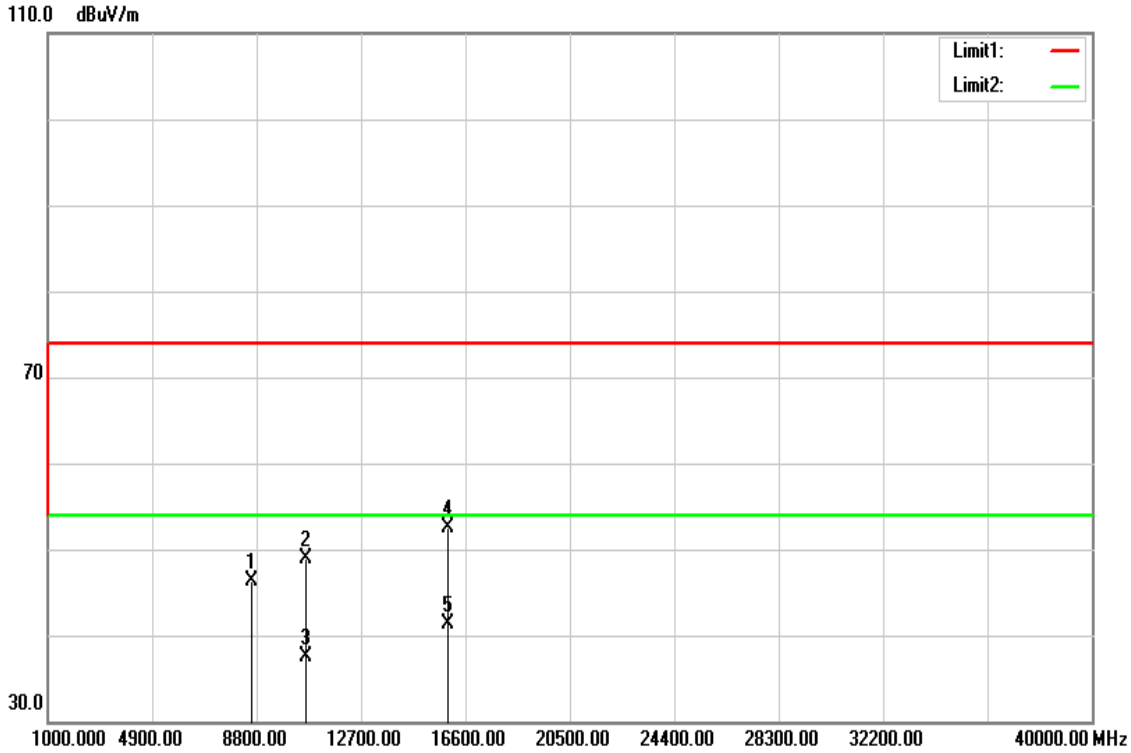



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8870.000 | 32.08 | 13.81 | 45.89 | 74.00 | -28.11 | peak |
| 10560.000 | 31.57 | 17.11 | 48.68 | 74.00 | -25.32 | peak |
| 10560.000 | 20.43 | 17.11 | 37.54 | 54.00 | -16.46 | AVG |
| 15840.000 | 32.76 | 19.30 | 52.06 | 74.00 | -21.94 | peak |
| 15840.000 | 22.47 | 19.30 | 41.77 | 54.00 | -12.23 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

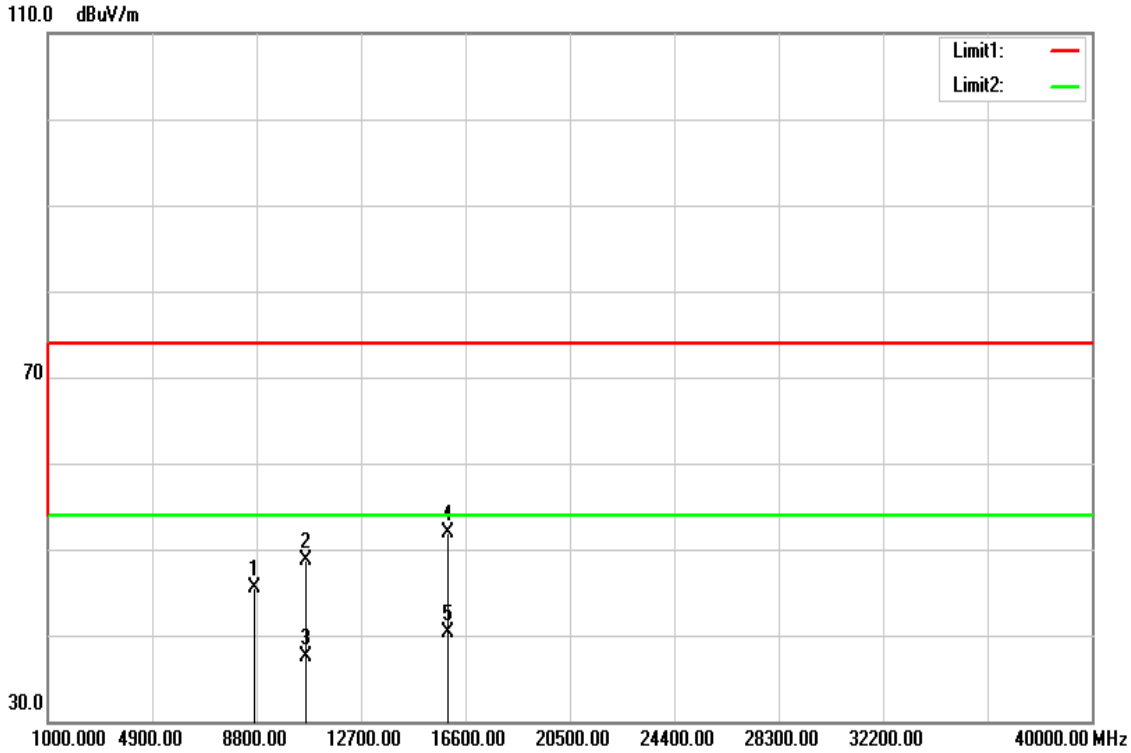



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8630.000 | 32.69 | 13.70 | 46.39 | 74.00 | -27.61 | peak |
| 10640.000 | 31.87 | 17.04 | 48.91 | 74.00 | -25.09 | peak |
| 10640.000 | 20.51 | 17.04 | 37.55 | 54.00 | -16.45 | AVG |
| 15960.000 | 33.15 | 19.40 | 52.55 | 74.00 | -21.45 | peak |
| 15960.000 | 21.98 | 19.40 | 41.38 | 54.00 | -12.62 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

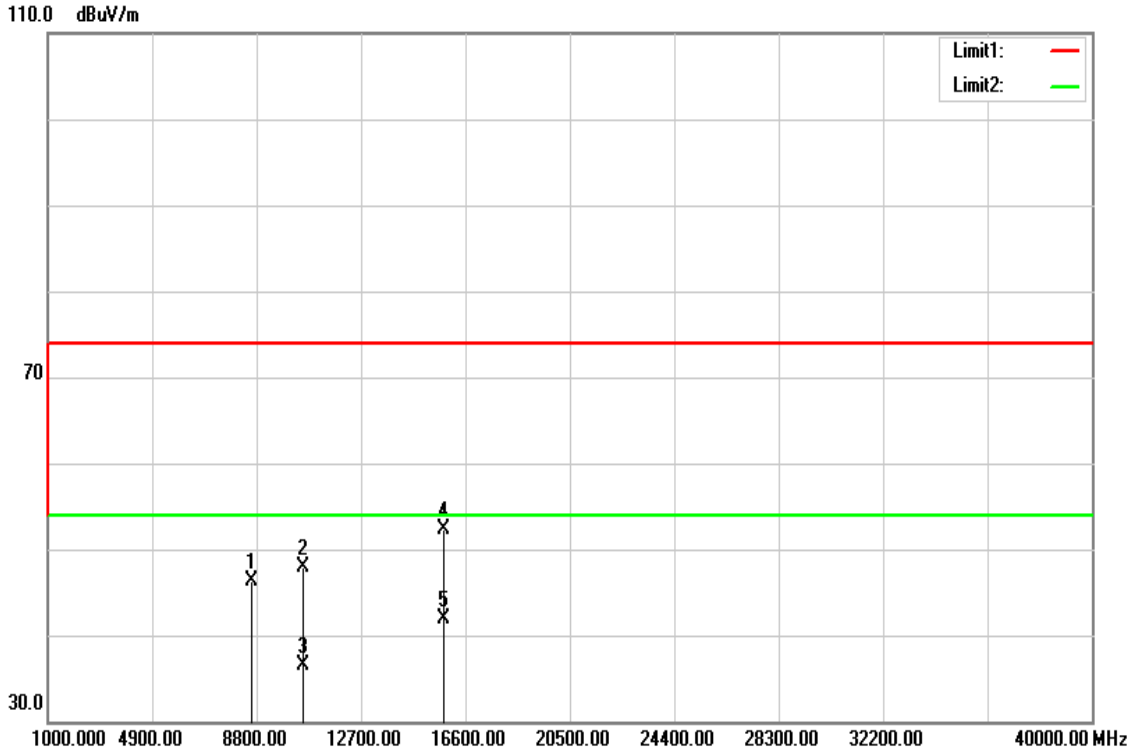



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8730.000 | 31.78 | 13.75 | 45.53 | 74.00 | -28.47 | peak |
| 10640.000 | 31.65 | 17.04 | 48.69 | 74.00 | -25.31 | peak |
| 10640.000 | 20.51 | 17.04 | 37.55 | 54.00 | -16.45 | AVG |
| 15960.000 | 32.42 | 19.40 | 51.82 | 74.00 | -22.18 | peak |
| 15960.000 | 20.98 | 19.40 | 40.38 | 54.00 | -13.62 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

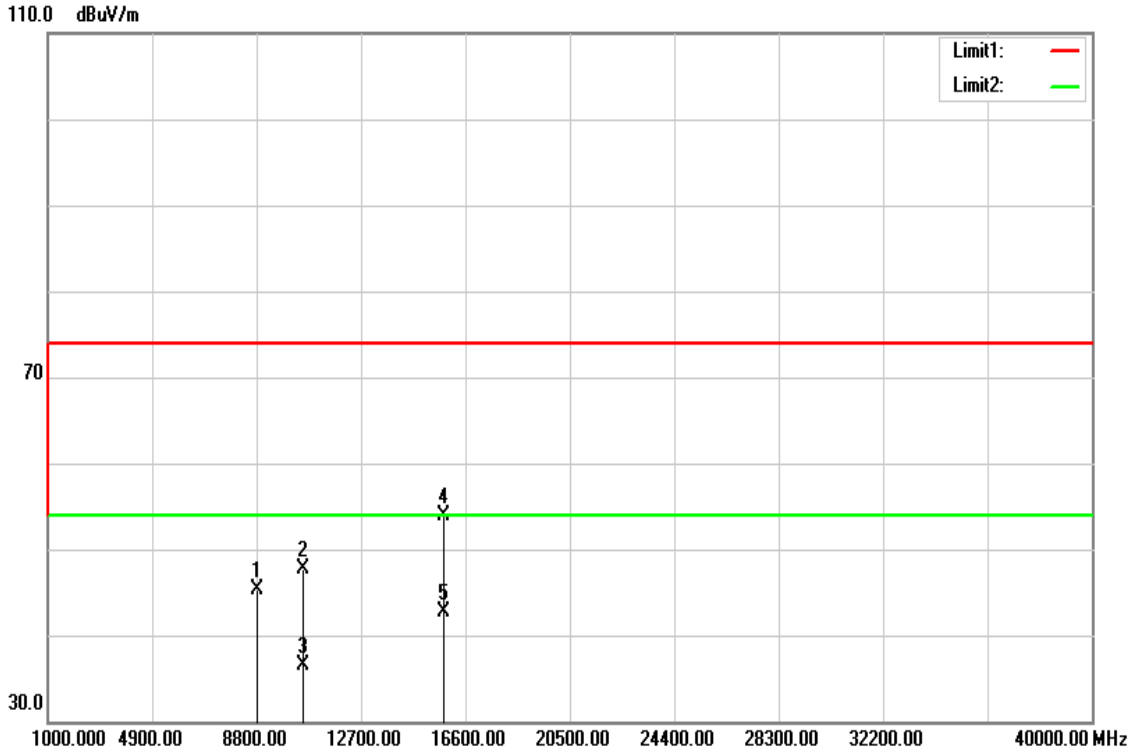



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8630.000 | 32.59 | 13.70 | 46.29 | 74.00 | -27.71 | peak |
| 10540.000 | 30.69 | 17.13 | 47.82 | 74.00 | -26.18 | peak |
| 10540.000 | 19.44 | 17.13 | 36.57 | 54.00 | -17.43 | AVG |
| 15810.000 | 33.00 | 19.27 | 52.27 | 74.00 | -21.73 | peak |
| 15810.000 | 22.59 | 19.27 | 41.86 | 54.00 | -12.14 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

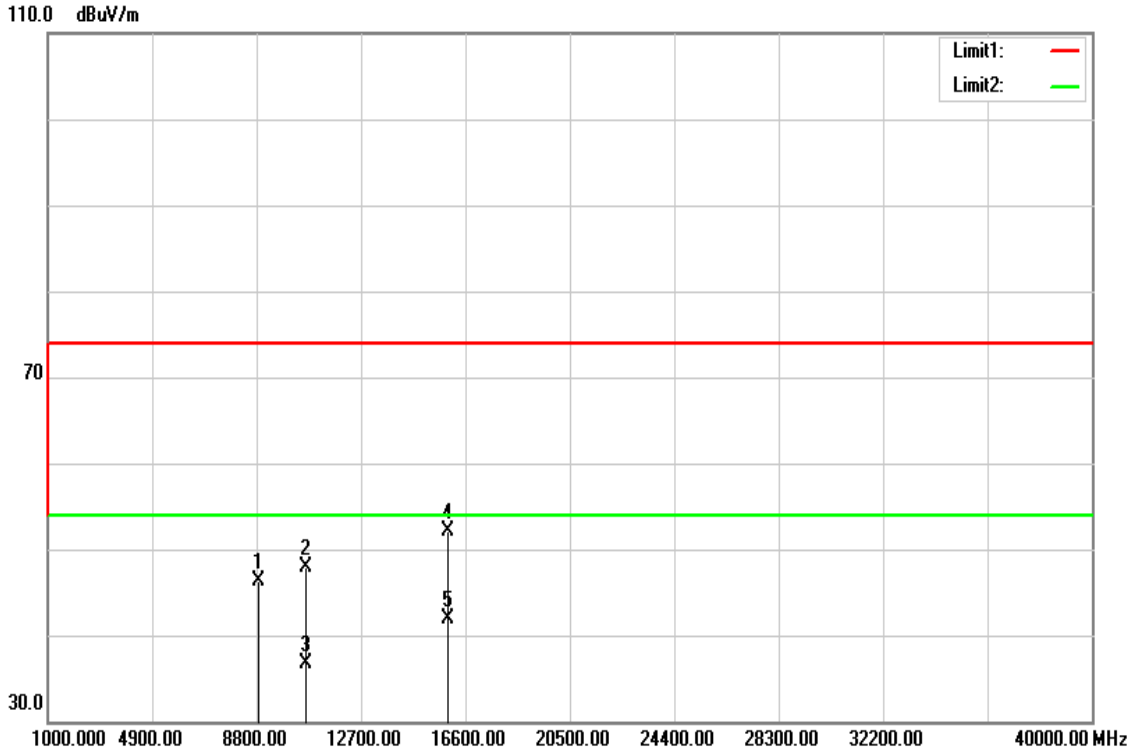



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8820.000 | 31.51 | 13.79 | 45.30 | 74.00 | -28.70 | peak |
| 10540.000 | 30.65 | 17.13 | 47.78 | 74.00 | -26.22 | peak |
| 10540.000 | 19.44 | 17.13 | 36.57 | 54.00 | -17.43 | AVG |
| 15810.000 | 34.60 | 19.27 | 53.87 | 74.00 | -20.13 | peak |
| 15810.000 | 23.36 | 19.27 | 42.63 | 54.00 | -11.37 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

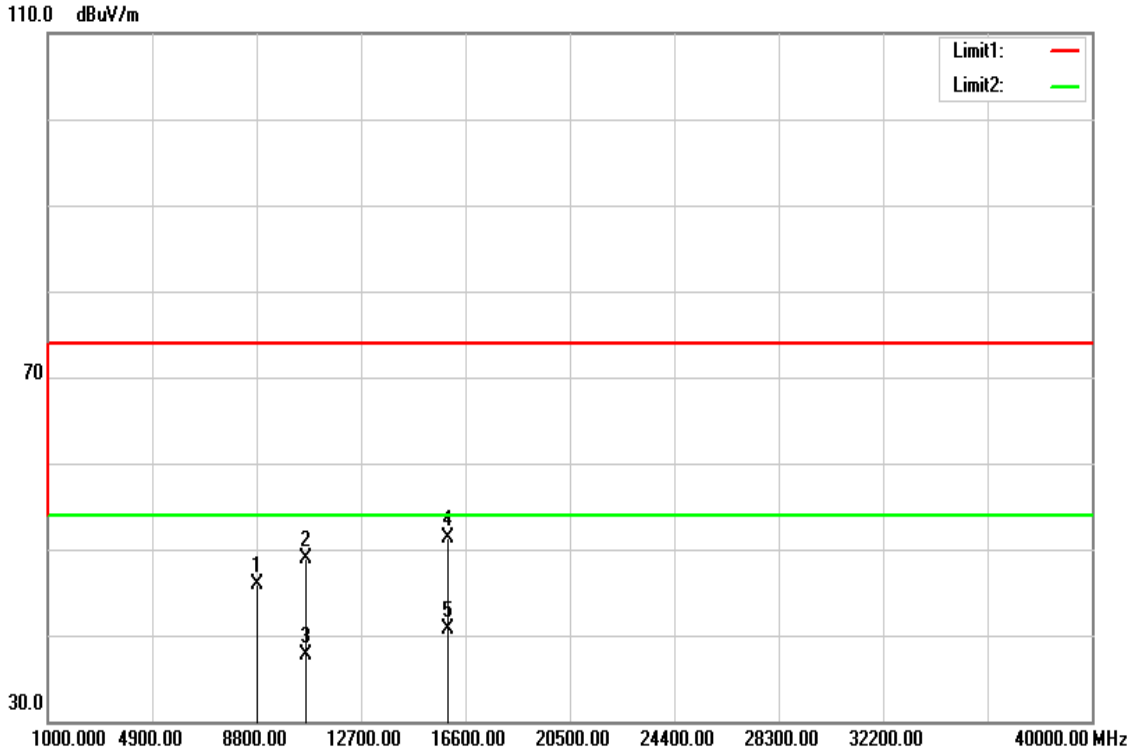



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8870.000 | 32.51 | 13.81 | 46.32 | 74.00 | -27.68 | peak |
| 10620.000 | 30.82 | 17.06 | 47.88 | 74.00 | -26.12 | peak |
| 10620.000 | 19.70 | 17.06 | 36.76 | 54.00 | -17.24 | AVG |
| 15930.000 | 32.64 | 19.37 | 52.01 | 74.00 | -21.99 | peak |
| 15930.000 | 22.49 | 19.37 | 41.86 | 54.00 | -12.14 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

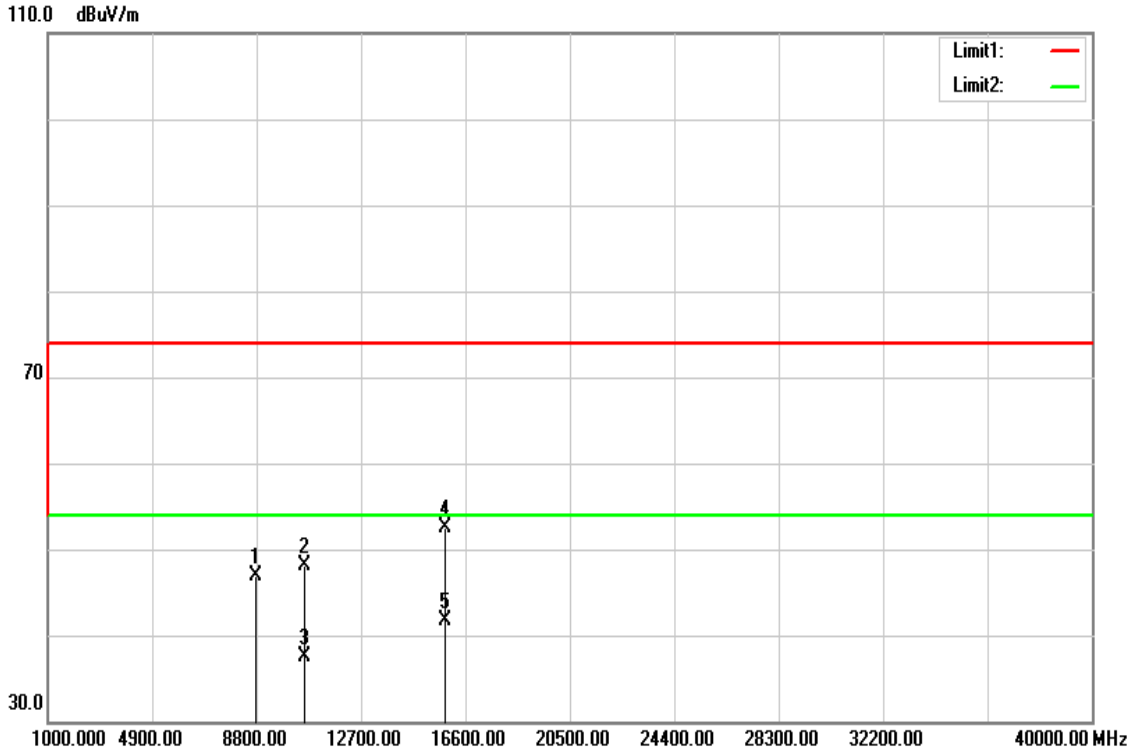



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8820.000 | 32.06 | 13.79 | 45.85 | 74.00 | -28.15 | peak |
| 10620.000 | 31.76 | 17.06 | 48.82 | 74.00 | -25.18 | peak |
| 10620.000 | 20.68 | 17.06 | 37.74 | 54.00 | -16.26 | AVG |
| 15930.000 | 31.98 | 19.37 | 51.35 | 74.00 | -22.65 | peak |
| 15930.000 | 21.31 | 19.37 | 40.68 | 54.00 | -13.32 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

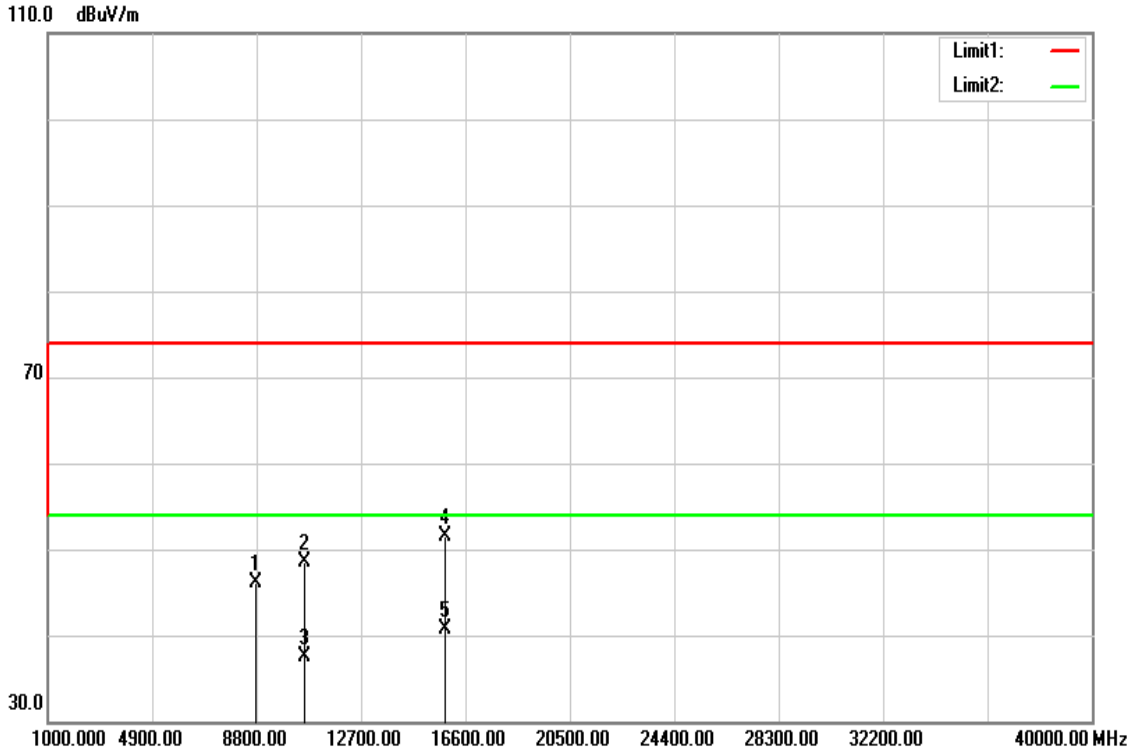



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8790.000 | 33.05 | 13.77 | 46.82 | 74.00 | -27.18 | peak |
| 10580.000 | 30.92 | 17.09 | 48.01 | 74.00 | -25.99 | peak |
| 10580.000 | 20.49 | 17.09 | 37.58 | 54.00 | -16.42 | AVG |
| 15870.000 | 33.11 | 19.32 | 52.43 | 74.00 | -21.57 | peak |
| 15870.000 | 22.47 | 19.32 | 41.79 | 54.00 | -12.21 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |



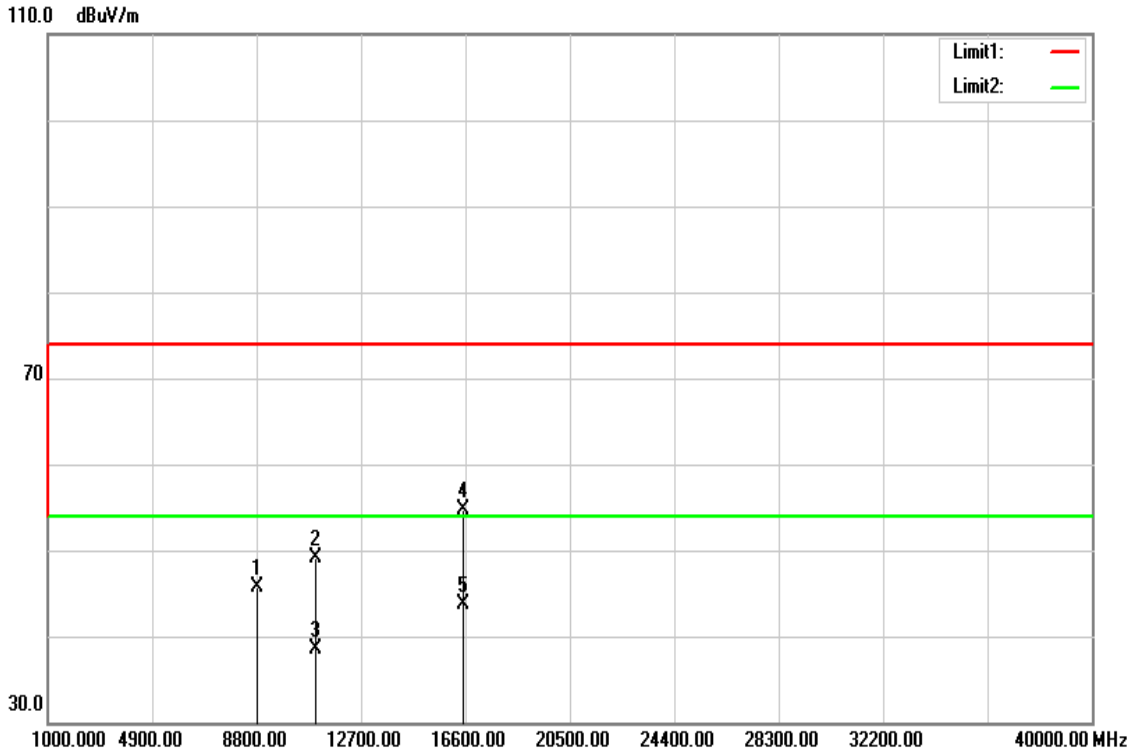

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8790.000 | 32.29 | 13.77 | 46.06 | 74.00 | -27.94 | peak |
| 10580.000 | 31.33 | 17.09 | 48.42 | 74.00 | -25.58 | peak |
| 10580.000 | 20.49 | 17.09 | 37.58 | 54.00 | -16.42 | AVG |
| 15870.000 | 32.10 | 19.32 | 51.42 | 74.00 | -22.58 | peak |
| 15870.000 | 21.34 | 19.32 | 40.66 | 54.00 | -13.34 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

## Above 1G Test Data for UNII-2c

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

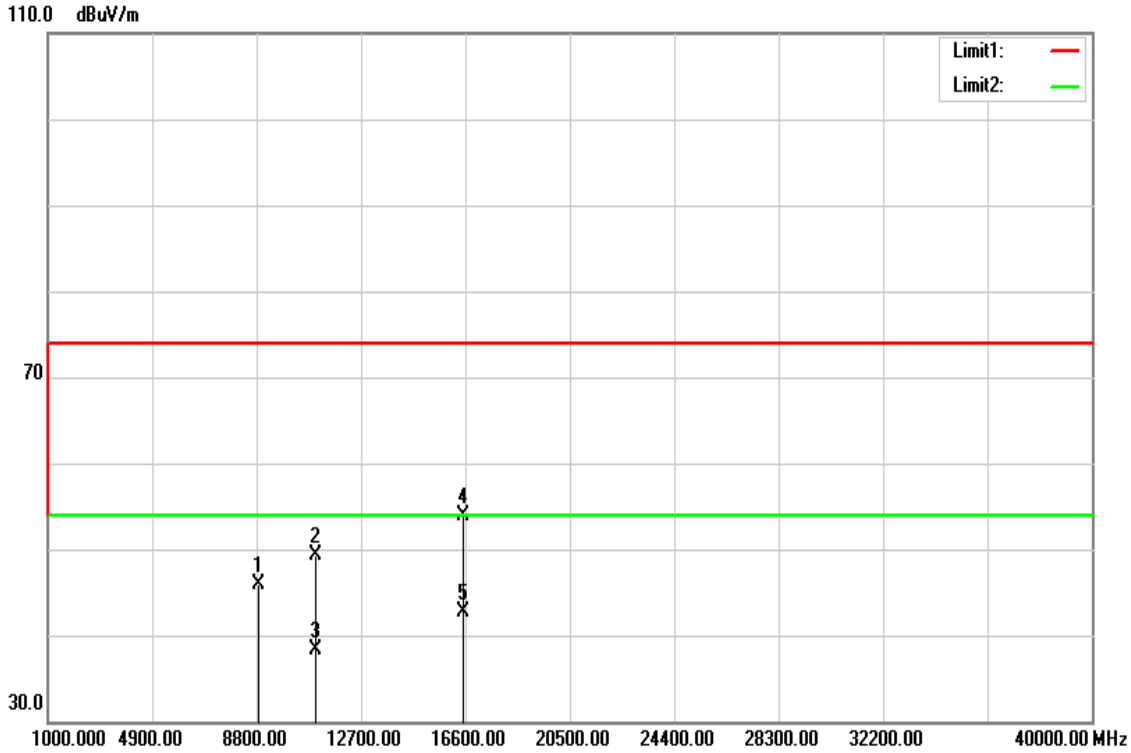



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8820.000 | 31.97 | 13.79 | 45.76 | 74.00 | -28.24 | peak |
| 11000.000 | 32.33 | 16.73 | 49.06 | 74.00 | -24.94 | peak |
| 11000.000 | 21.82 | 16.73 | 38.55 | 54.00 | -15.45 | AVG |
| 16500.000 | 33.34 | 21.39 | 54.73 | 74.00 | -19.27 | peak |
| 16500.000 | 22.30 | 21.39 | 43.69 | 54.00 | -10.31 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

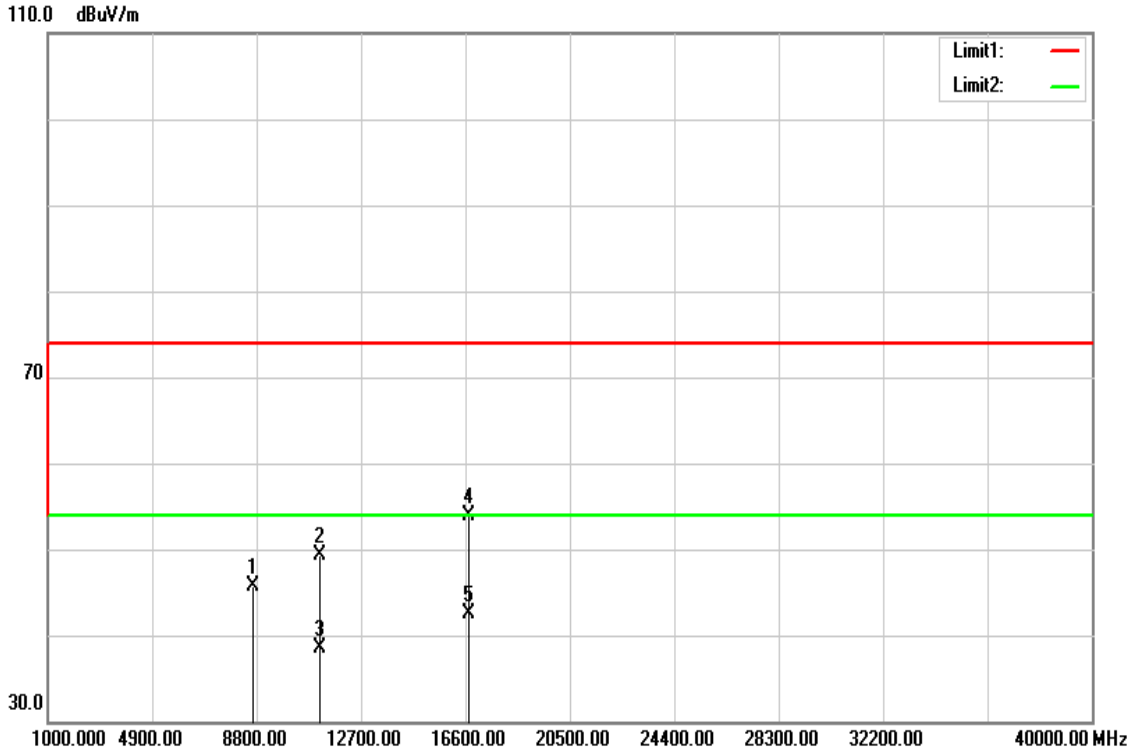



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8860.000 | 32.08 | 13.81 | 45.89 | 74.00 | -28.11 | peak |
| 11000.000 | 32.54 | 16.73 | 49.27 | 74.00 | -24.73 | peak |
| 11000.000 | 21.61 | 16.73 | 38.34 | 54.00 | -15.66 | AVG |
| 16500.000 | 32.55 | 21.39 | 53.94 | 74.00 | -20.06 | peak |
| 16500.000 | 21.28 | 21.39 | 42.67 | 54.00 | -11.33 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

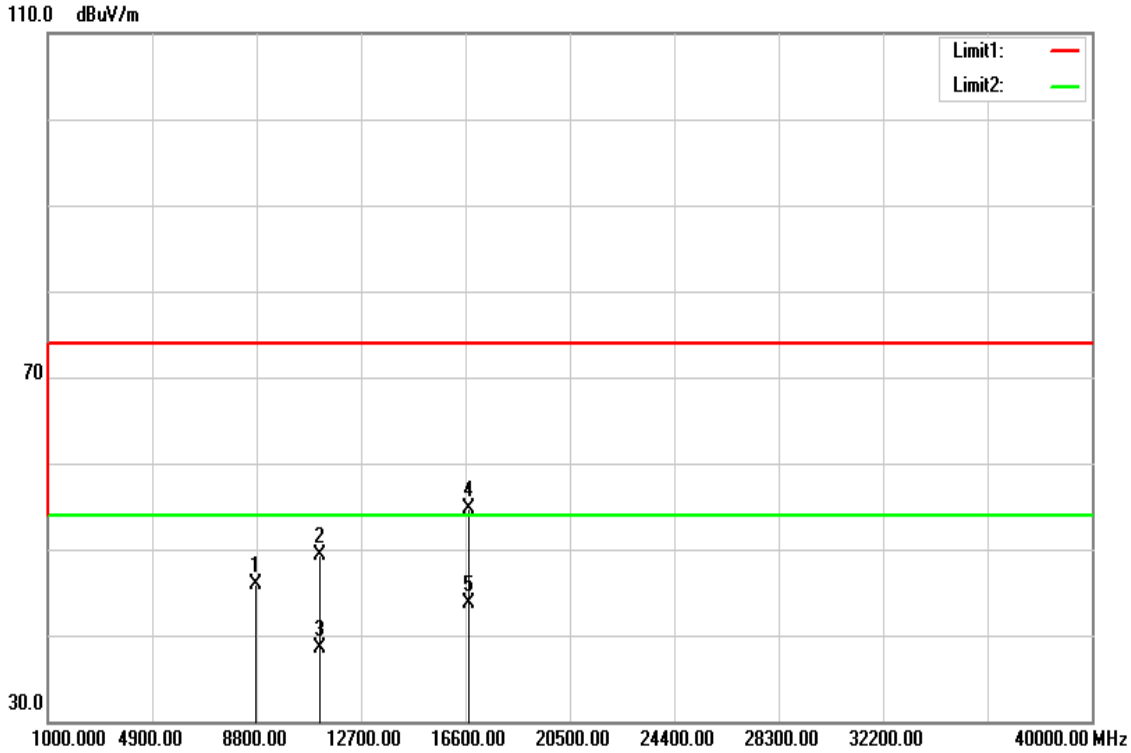



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8650.000 | 32.02 | 13.71 | 45.73 | 74.00 | -28.27 | peak |
| 11160.000 | 32.62 | 16.75 | 49.37 | 74.00 | -24.63 | peak |
| 11160.000 | 21.68 | 16.75 | 38.43 | 54.00 | -15.57 | AVG |
| 16740.000 | 31.08 | 22.82 | 53.90 | 74.00 | -20.10 | peak |
| 16740.000 | 19.77 | 22.82 | 42.59 | 54.00 | -11.41 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

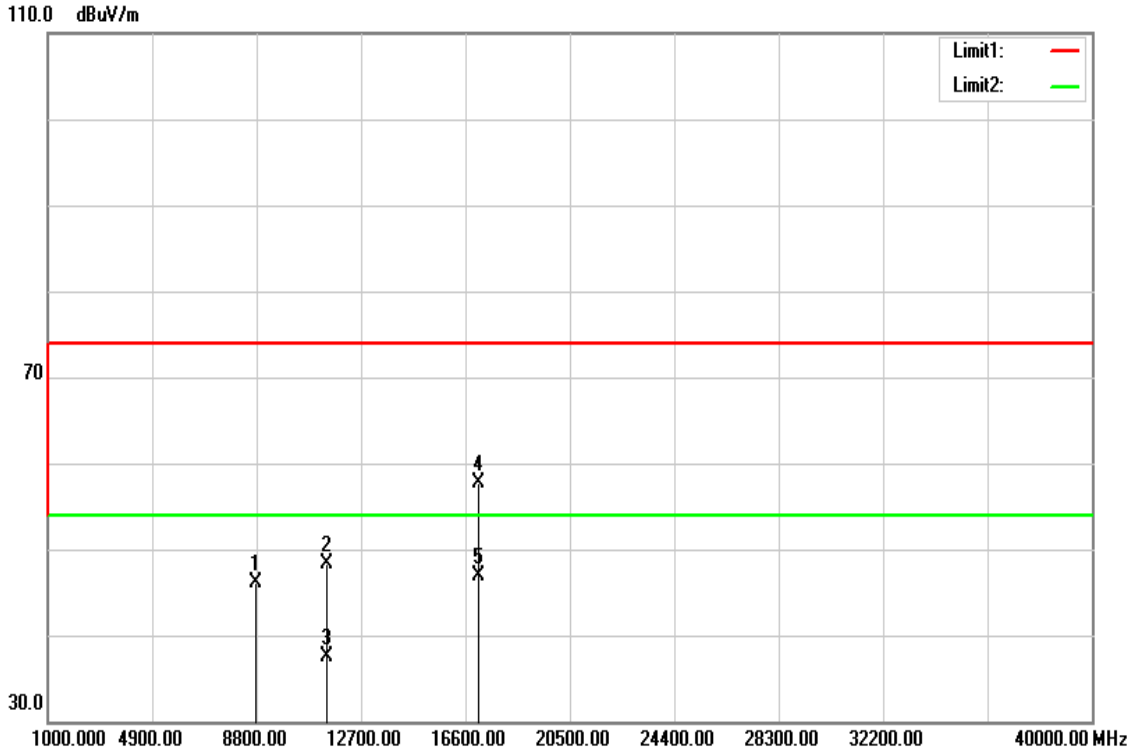



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.24 | 13.75 | 45.99 | 74.00 | -28.01 | peak |
| 11160.000 | 32.65 | 16.75 | 49.40 | 74.00 | -24.60 | peak |
| 11160.000 | 21.83 | 16.75 | 38.58 | 54.00 | -15.42 | AVG |
| 16740.000 | 31.91 | 22.82 | 54.73 | 74.00 | -19.27 | peak |
| 16740.000 | 20.79 | 22.82 | 43.61 | 54.00 | -10.39 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

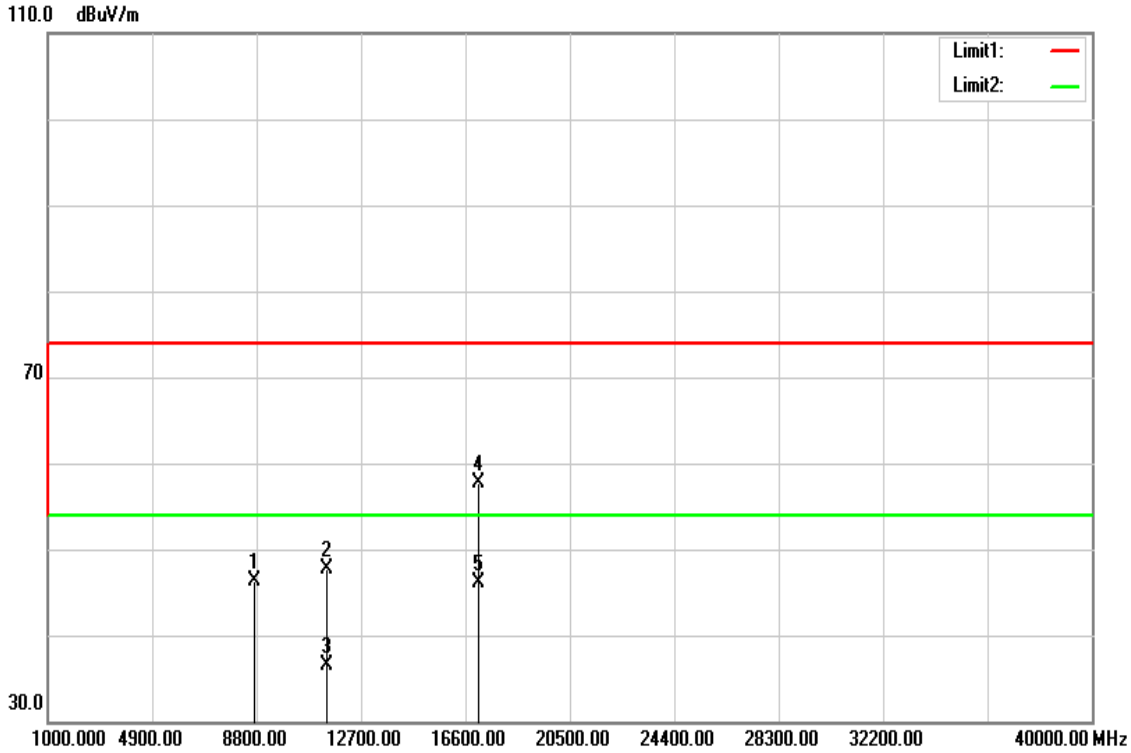



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.34 | 13.75 | 46.09 | 74.00 | -27.91 | peak |
| 11400.000 | 31.49 | 16.77 | 48.26 | 74.00 | -25.74 | peak |
| 11400.000 | 20.78 | 16.77 | 37.55 | 54.00 | -16.45 | AVG |
| 17100.000 | 32.95 | 24.75 | 57.70 | 74.00 | -16.30 | peak |
| 17100.000 | 22.08 | 24.75 | 46.83 | 54.00 | -7.17 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

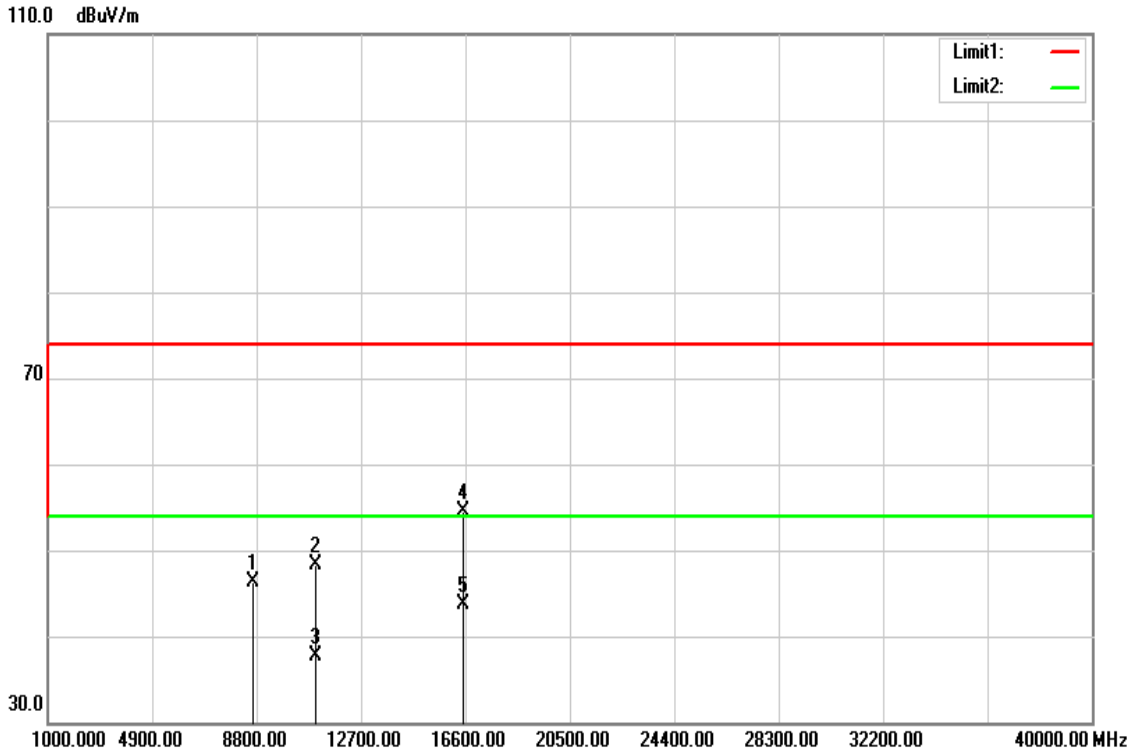



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8740.000 | 32.54 | 13.75 | 46.29 | 74.00 | -27.71 | peak |
| 11400.000 | 30.99 | 16.77 | 47.76 | 74.00 | -26.24 | peak |
| 11400.000 | 19.75 | 16.77 | 36.52 | 54.00 | -17.48 | AVG |
| 17100.000 | 32.96 | 24.75 | 57.71 | 74.00 | -16.29 | peak |
| 17100.000 | 21.43 | 24.75 | 46.18 | 54.00 | -7.82 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

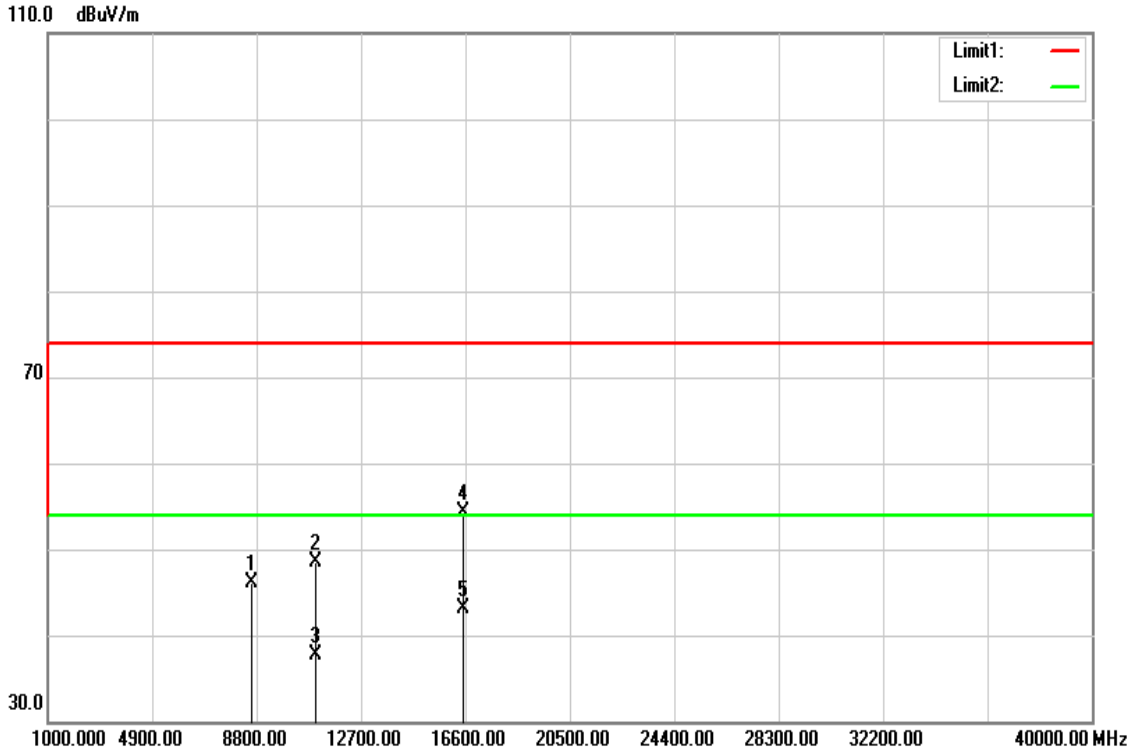



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8690.000 | 32.47 | 13.73 | 46.20 | 74.00 | -27.80 | peak |
| 11000.000 | 31.57 | 16.73 | 48.30 | 74.00 | -25.70 | peak |
| 11000.000 | 21.01 | 16.73 | 37.74 | 54.00 | -16.26 | AVG |
| 16500.000 | 33.14 | 21.39 | 54.53 | 74.00 | -19.47 | peak |
| 16500.000 | 22.27 | 21.39 | 43.66 | 54.00 | -10.34 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

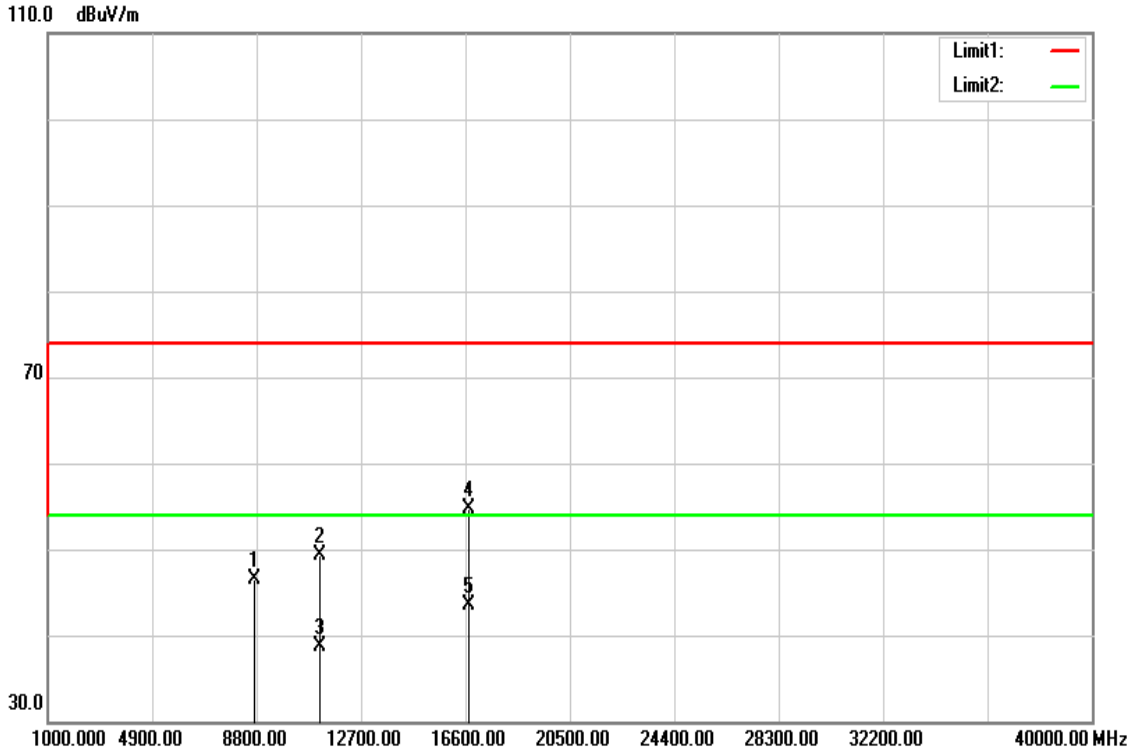



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8610.000 | 32.39 | 13.69 | 46.08 | 74.00 | -27.92 | peak |
| 11000.000 | 31.75 | 16.73 | 48.48 | 74.00 | -25.52 | peak |
| 11000.000 | 20.91 | 16.73 | 37.64 | 54.00 | -16.36 | AVG |
| 16500.000 | 32.83 | 21.39 | 54.22 | 74.00 | -19.78 | peak |
| 16500.000 | 21.80 | 21.39 | 43.19 | 54.00 | -10.81 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

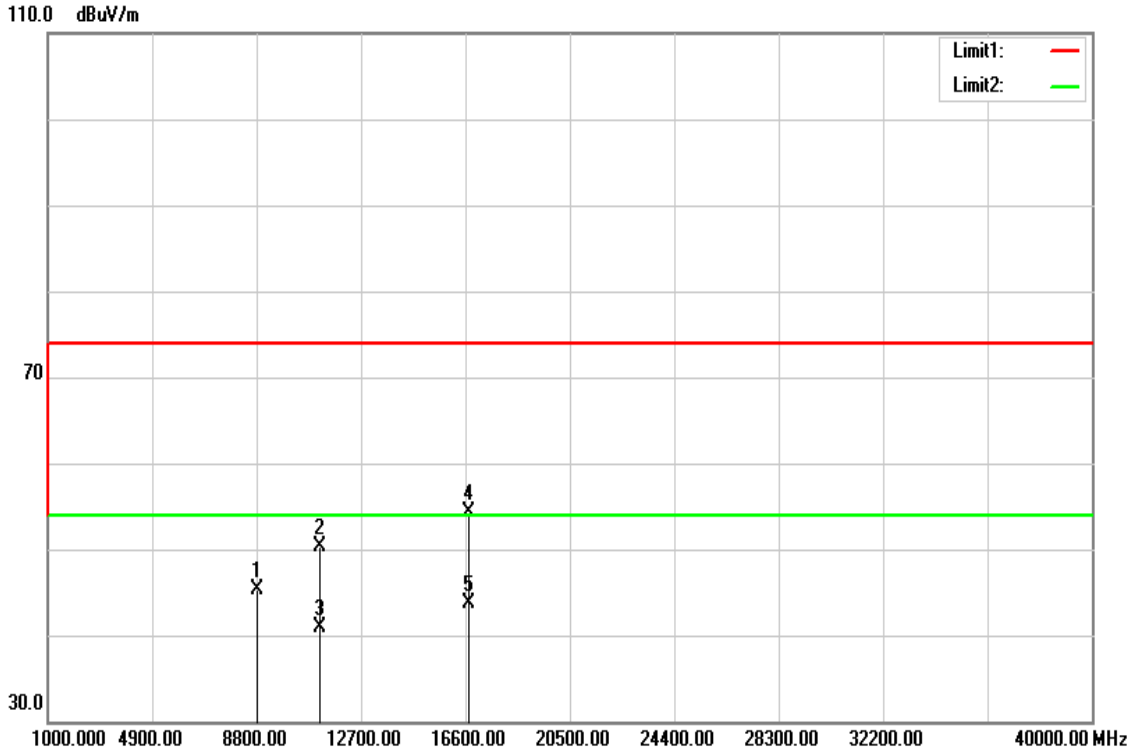



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8710.000 | 32.77 | 13.74 | 46.51 | 74.00 | -27.49 | peak |
| 11160.000 | 32.61 | 16.75 | 49.36 | 74.00 | -24.64 | peak |
| 11160.000 | 21.96 | 16.75 | 38.71 | 54.00 | -15.29 | AVG |
| 16740.000 | 31.87 | 22.82 | 54.69 | 74.00 | -19.31 | peak |
| 16740.000 | 20.77 | 22.82 | 43.59 | 54.00 | -10.41 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

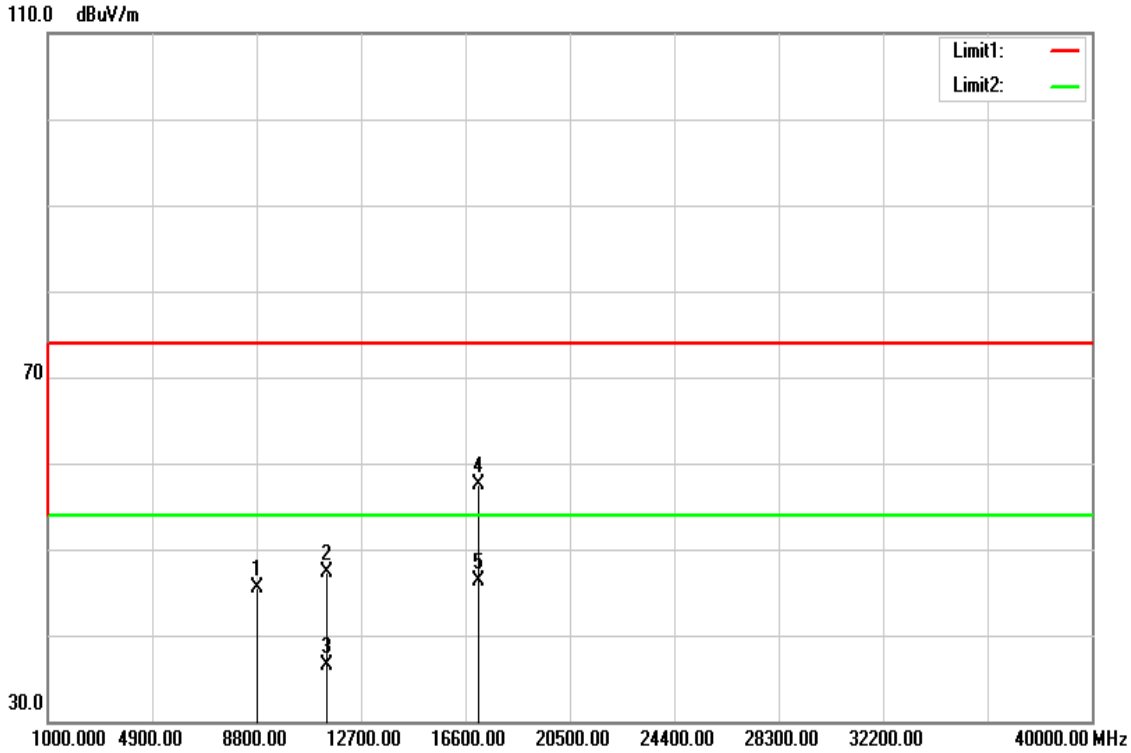



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8830.000 | 31.49 | 13.79 | 45.28 | 74.00 | -28.72 | peak |
| 11160.000 | 33.63 | 16.75 | 50.38 | 74.00 | -23.62 | peak |
| 11160.000 | 24.14 | 16.75 | 40.89 | 54.00 | -13.11 | AVG |
| 16740.000 | 31.42 | 22.82 | 54.24 | 74.00 | -19.76 | peak |
| 16740.000 | 20.94 | 22.82 | 43.76 | 54.00 | -10.24 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

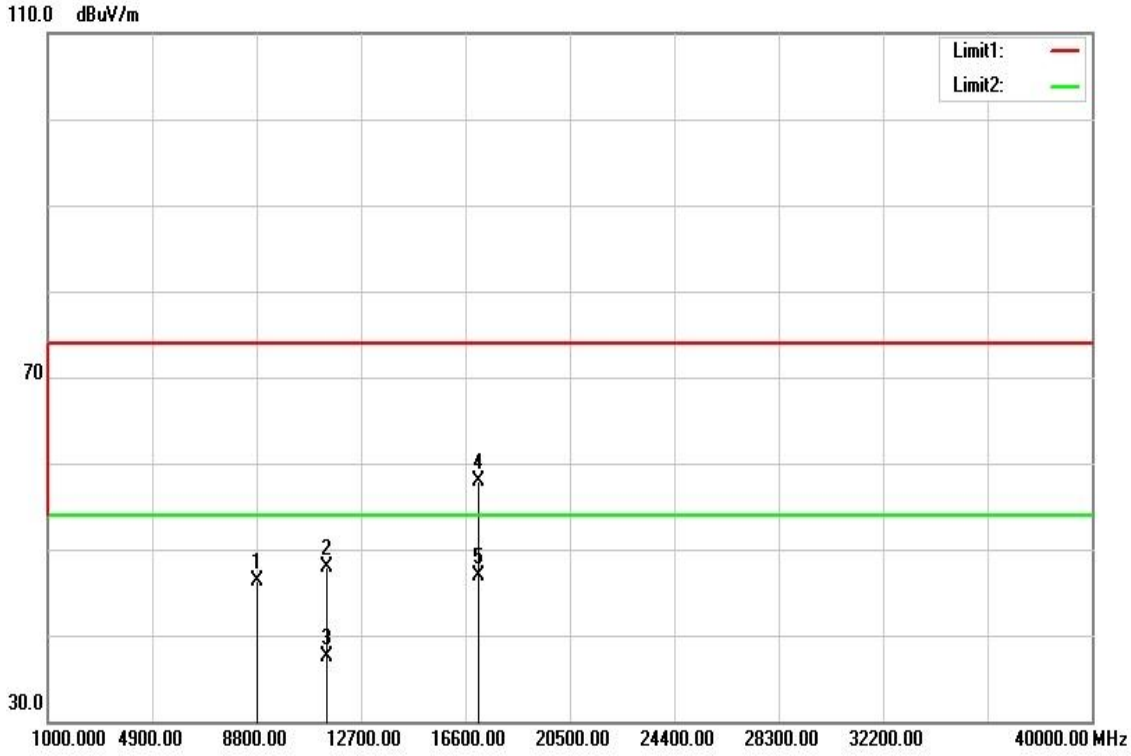



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8820.000 | 31.80 | 13.79 | 45.59 | 74.00 | -28.41 | peak |
| 11400.000 | 30.59 | 16.77 | 47.36 | 74.00 | -26.64 | peak |
| 11400.000 | 19.70 | 16.77 | 36.47 | 54.00 | -17.53 | AVG |
| 17100.000 | 32.82 | 24.75 | 57.57 | 74.00 | -16.43 | peak |
| 17100.000 | 21.54 | 24.75 | 46.29 | 54.00 | -7.71 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

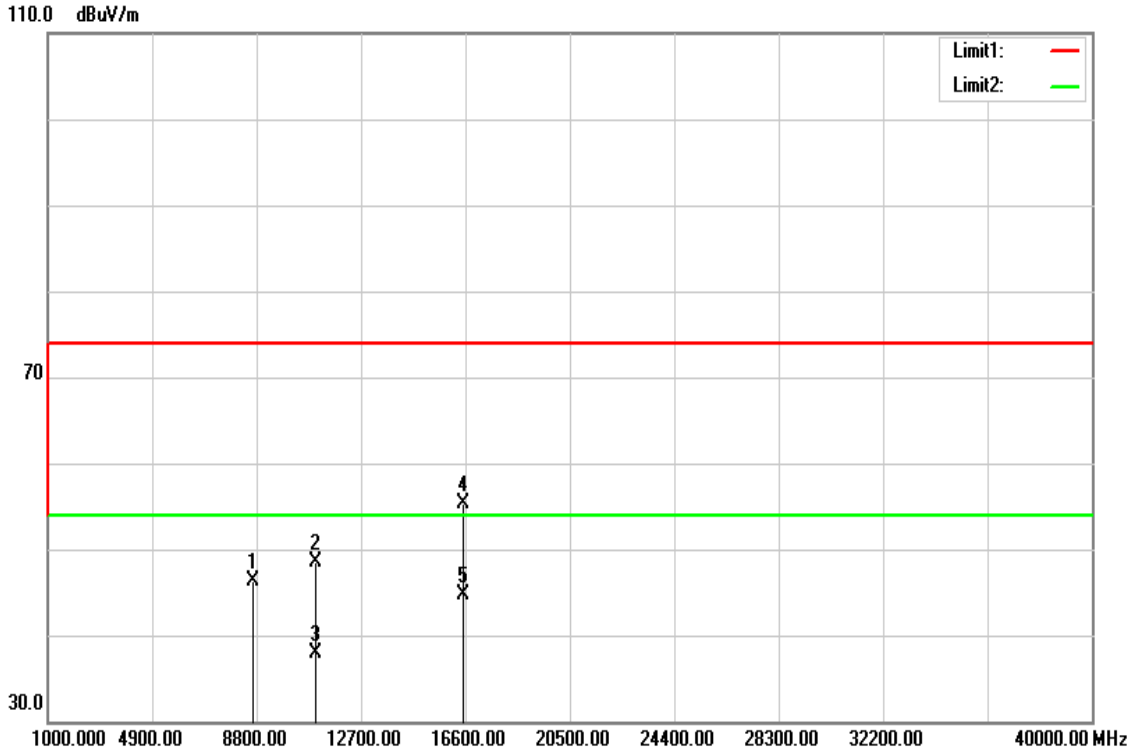



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8830.000 | 32.55 | 13.79 | 46.34 | 74.00 | -27.66 | peak |
| 11400.000 | 31.23 | 16.77 | 48.00 | 74.00 | -26.00 | peak |
| 11400.000 | 20.82 | 16.77 | 37.59 | 54.00 | -16.41 | AVG |
| 17100.000 | 33.20 | 24.75 | 57.95 | 74.00 | -16.05 | peak |
| 17100.000 | 22.08 | 24.75 | 46.83 | 54.00 | -7.17 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

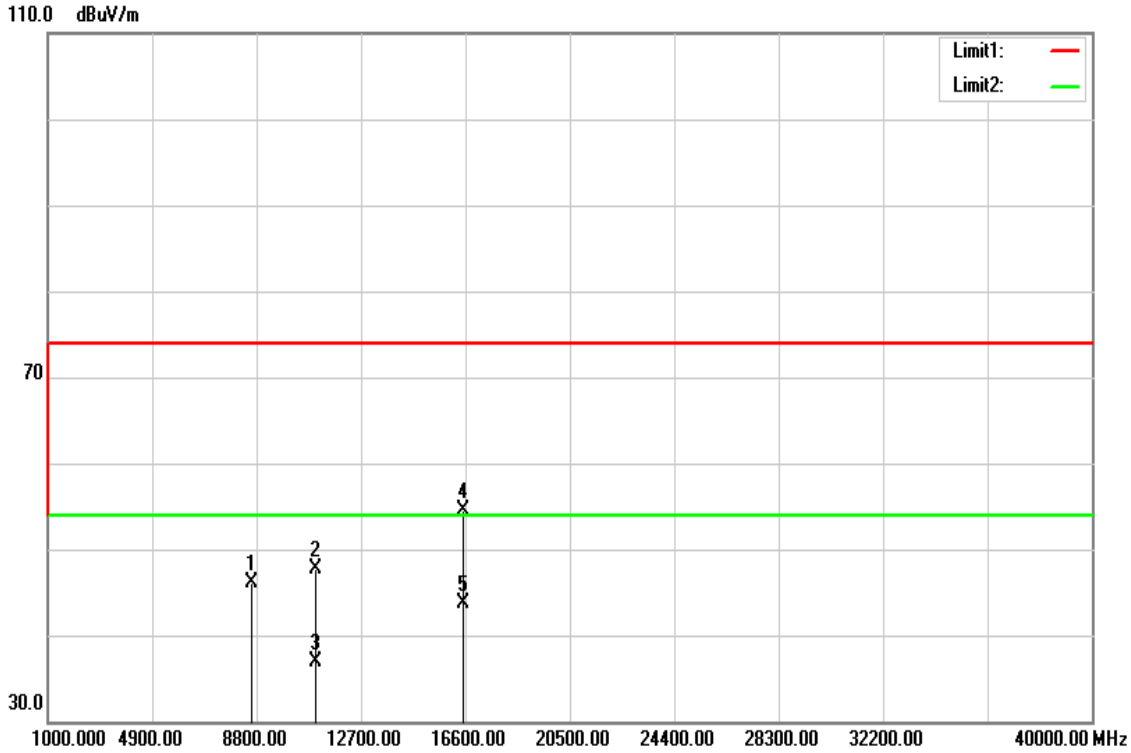



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8670.000 | 32.60 | 13.72 | 46.32 | 74.00 | -27.68 | peak |
| 11020.000 | 31.75 | 16.73 | 48.48 | 74.00 | -25.52 | peak |
| 11020.000 | 21.16 | 16.73 | 37.89 | 54.00 | -16.11 | AVG |
| 16530.000 | 33.66 | 21.57 | 55.23 | 74.00 | -18.77 | peak |
| 16530.000 | 23.10 | 21.57 | 44.67 | 54.00 | -9.33 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

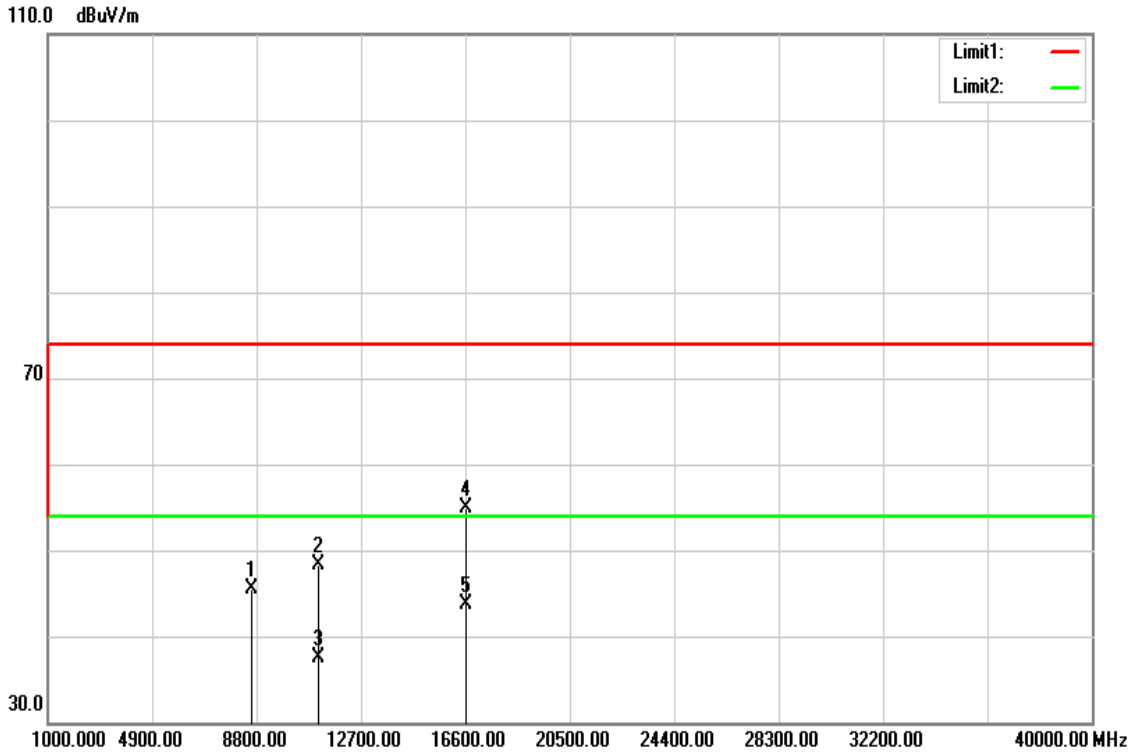



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8640.000 | 32.49 | 13.70 | 46.19 | 74.00 | -27.81 | peak |
| 11020.000 | 30.99 | 16.73 | 47.72 | 74.00 | -26.28 | peak |
| 11020.000 | 20.21 | 16.73 | 36.94 | 54.00 | -17.06 | AVG |
| 16530.000 | 32.94 | 21.57 | 54.51 | 74.00 | -19.49 | peak |
| 16530.000 | 22.20 | 21.57 | 43.77 | 54.00 | -10.23 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

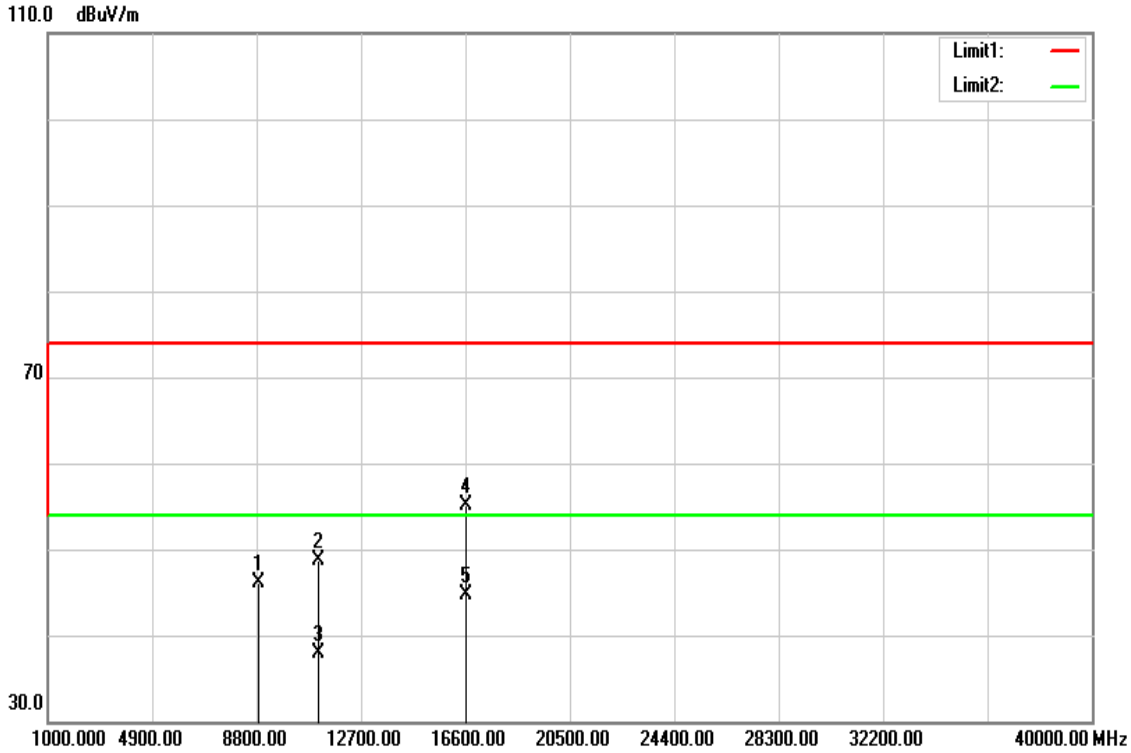



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8640.000 | 31.86 | 13.70 | 45.56 | 74.00 | -28.44 | peak |
| 11100.000 | 31.53 | 16.74 | 48.27 | 74.00 | -25.73 | peak |
| 11100.000 | 20.84 | 16.74 | 37.58 | 54.00 | -16.42 | AVG |
| 16650.000 | 32.70 | 22.28 | 54.98 | 74.00 | -19.02 | peak |
| 16650.000 | 21.51 | 22.28 | 43.79 | 54.00 | -10.21 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

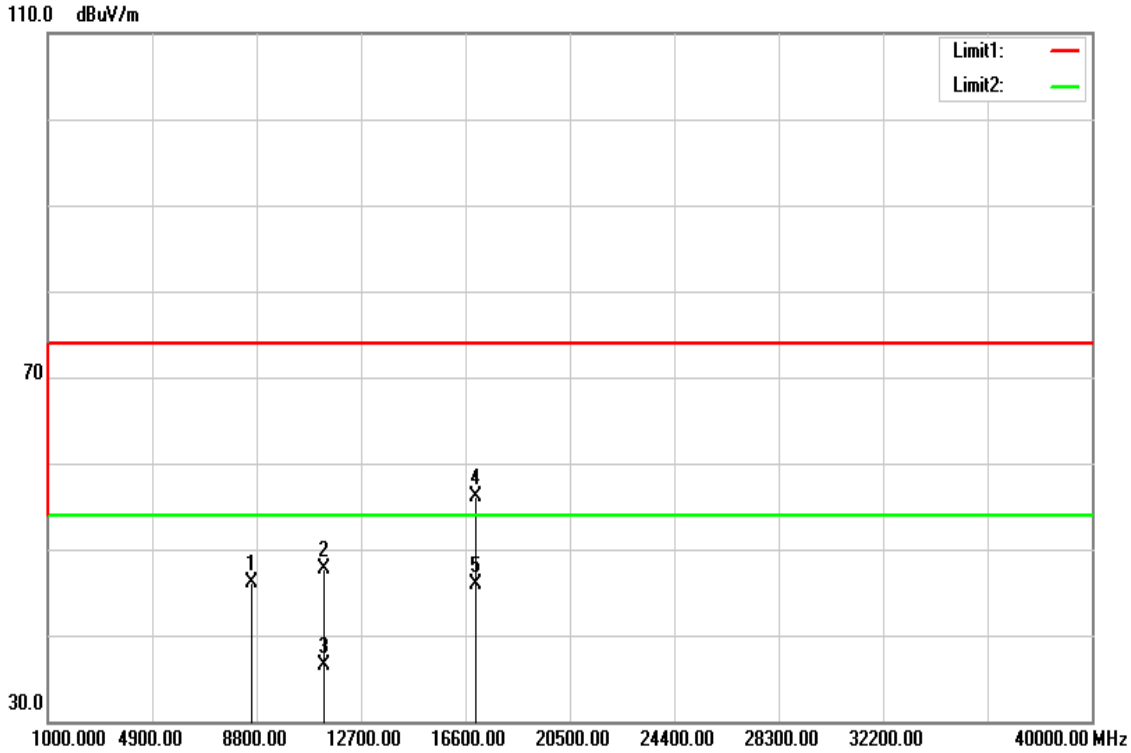



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8890.000 | 32.32 | 13.82 | 46.14 | 74.00 | -27.86 | peak |
| 11100.000 | 31.91 | 16.74 | 48.65 | 74.00 | -25.35 | peak |
| 11100.000 | 21.13 | 16.74 | 37.87 | 54.00 | -16.13 | AVG |
| 16650.000 | 32.76 | 22.28 | 55.04 | 74.00 | -18.96 | peak |
| 16650.000 | 22.41 | 22.28 | 44.69 | 54.00 | -9.31 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

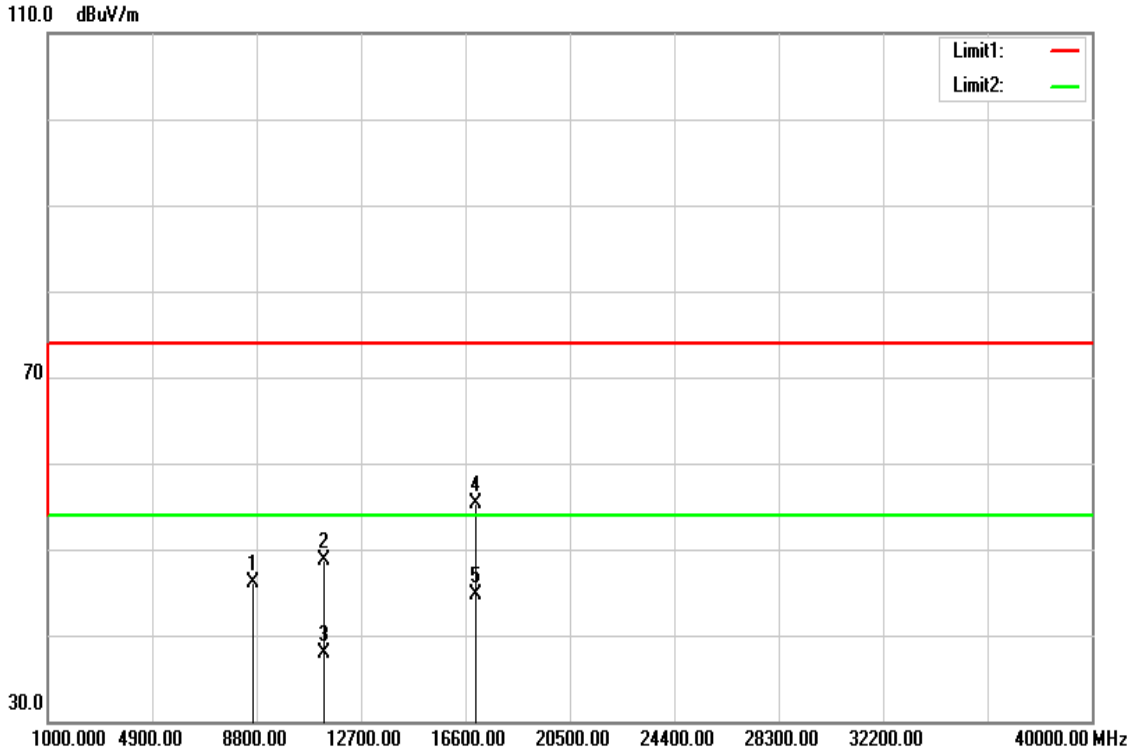



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8640.000 | 32.45 | 13.70 | 46.15 | 74.00 | -27.85 | peak |
| 11340.000 | 30.96 | 16.76 | 47.72 | 74.00 | -26.28 | peak |
| 11340.000 | 19.72 | 16.76 | 36.48 | 54.00 | -17.52 | AVG |
| 17010.000 | 31.78 | 24.40 | 56.18 | 74.00 | -17.82 | peak |
| 17010.000 | 21.52 | 24.40 | 45.92 | 54.00 | -8.08 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

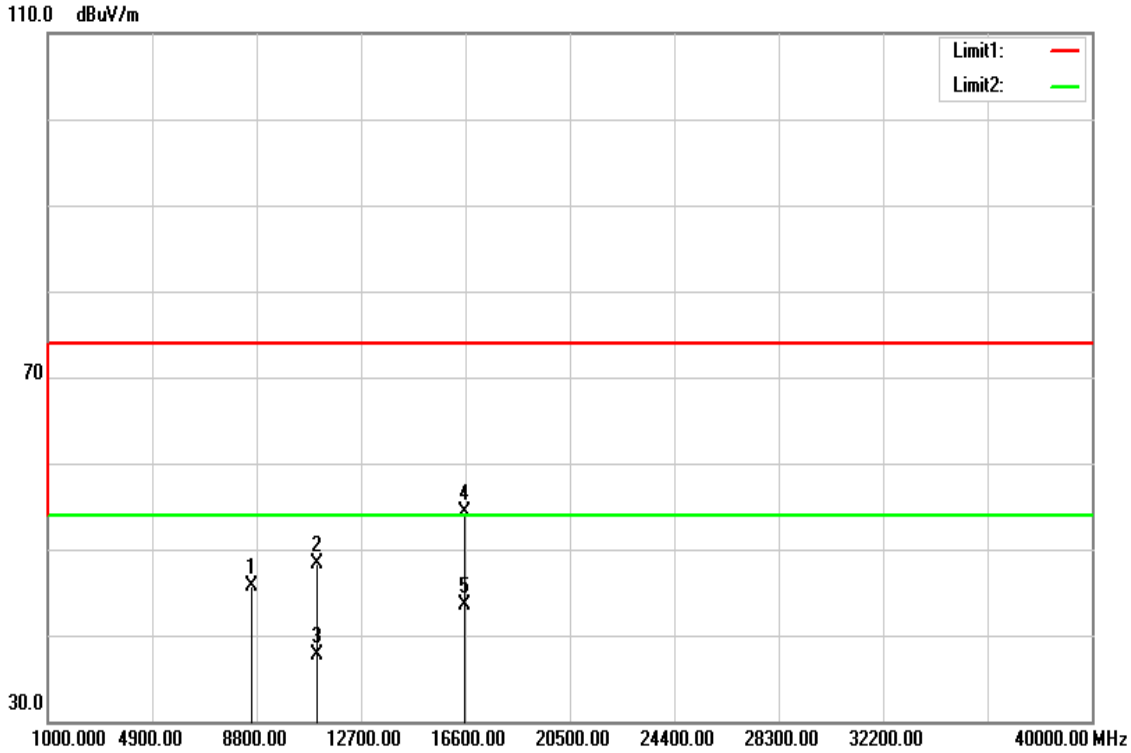



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8670.000 | 32.29 | 13.72 | 46.01 | 74.00 | -27.99 | peak |
| 11340.000 | 31.92 | 16.76 | 48.68 | 74.00 | -25.32 | peak |
| 11340.000 | 21.11 | 16.76 | 37.87 | 54.00 | -16.13 | AVG |
| 17010.000 | 30.81 | 24.40 | 55.21 | 74.00 | -18.79 | peak |
| 17010.000 | 20.29 | 24.40 | 44.69 | 54.00 | -9.31 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

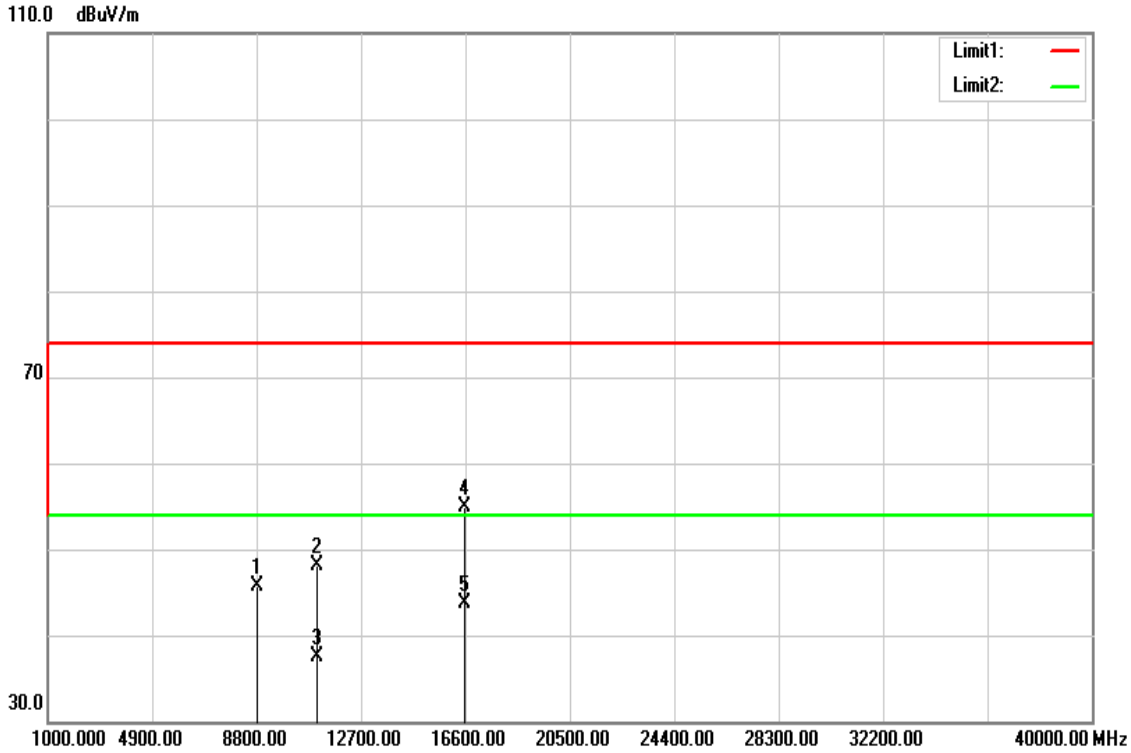



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8630.000 | 31.96 | 13.70 | 45.66 | 74.00 | -28.34 | peak |
| 11060.000 | 31.66 | 16.74 | 48.40 | 74.00 | -25.60 | peak |
| 11060.000 | 21.03 | 16.74 | 37.77 | 54.00 | -16.23 | AVG |
| 16590.000 | 32.46 | 21.92 | 54.38 | 74.00 | -19.62 | peak |
| 16590.000 | 21.62 | 21.92 | 43.54 | 54.00 | -10.46 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |



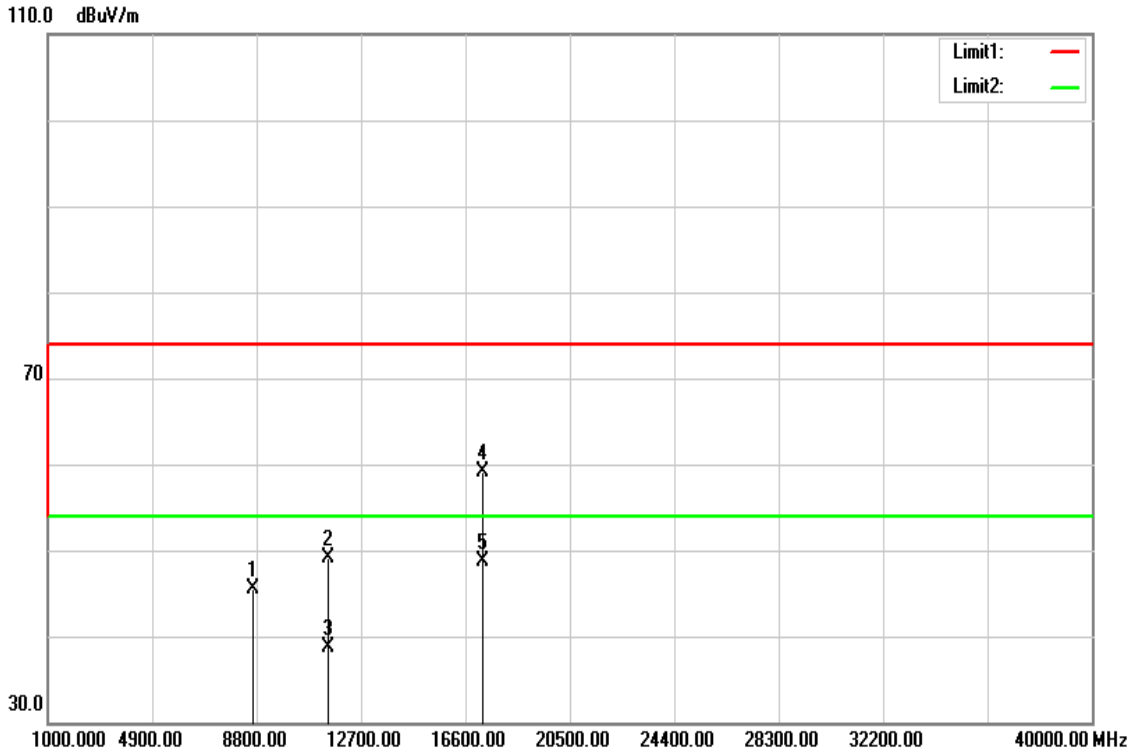

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8840.000 | 31.89 | 13.80 | 45.69 | 74.00 | -28.31 | peak |
| 11060.000 | 31.37 | 16.74 | 48.11 | 74.00 | -25.89 | peak |
| 11060.000 | 20.73 | 16.74 | 37.47 | 54.00 | -16.53 | AVG |
| 16590.000 | 32.96 | 21.92 | 54.88 | 74.00 | -19.12 | peak |
| 16590.000 | 21.69 | 21.92 | 43.61 | 54.00 | -10.39 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

## Above 1G Test Data for UNII-3

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

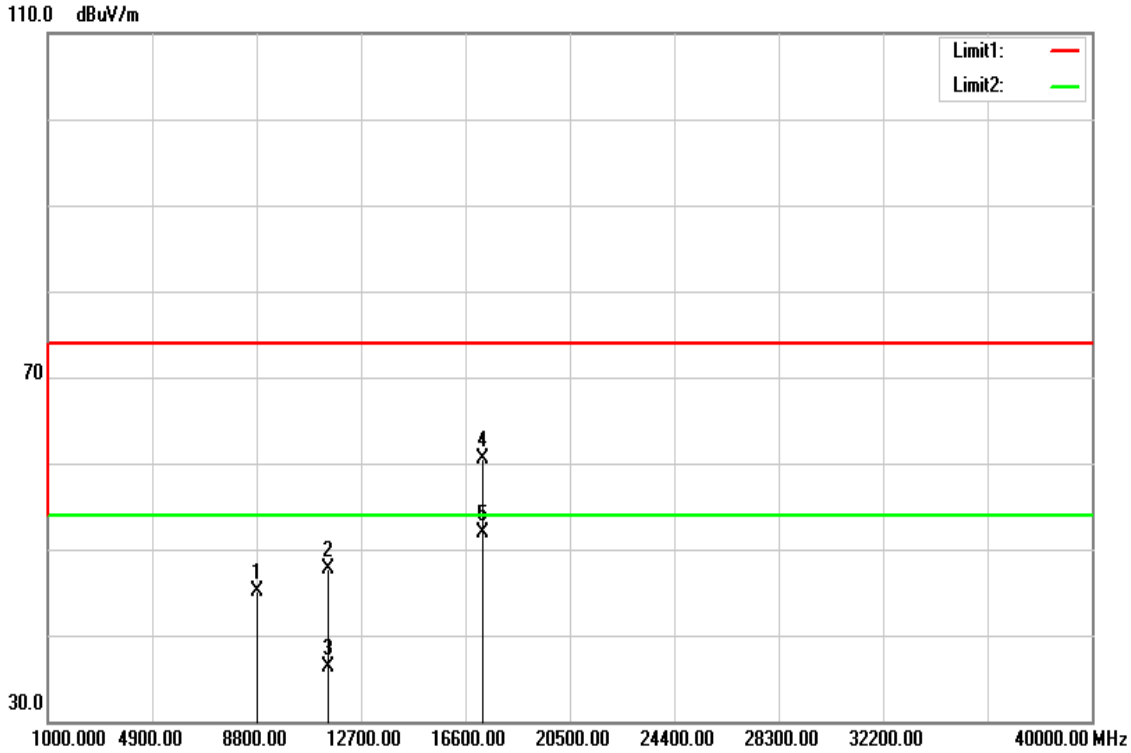



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8650.000 | 31.80 | 13.71 | 45.51 | 74.00 | -28.49 | peak |
| 11490.000 | 32.26 | 16.78 | 49.04 | 74.00 | -24.96 | peak |
| 11490.000 | 21.88 | 16.78 | 38.66 | 54.00 | -15.34 | AVG |
| 17235.000 | 33.83 | 25.28 | 59.11 | 74.00 | -14.89 | peak |
| 17235.000 | 23.51 | 25.28 | 48.79 | 54.00 | -5.21 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

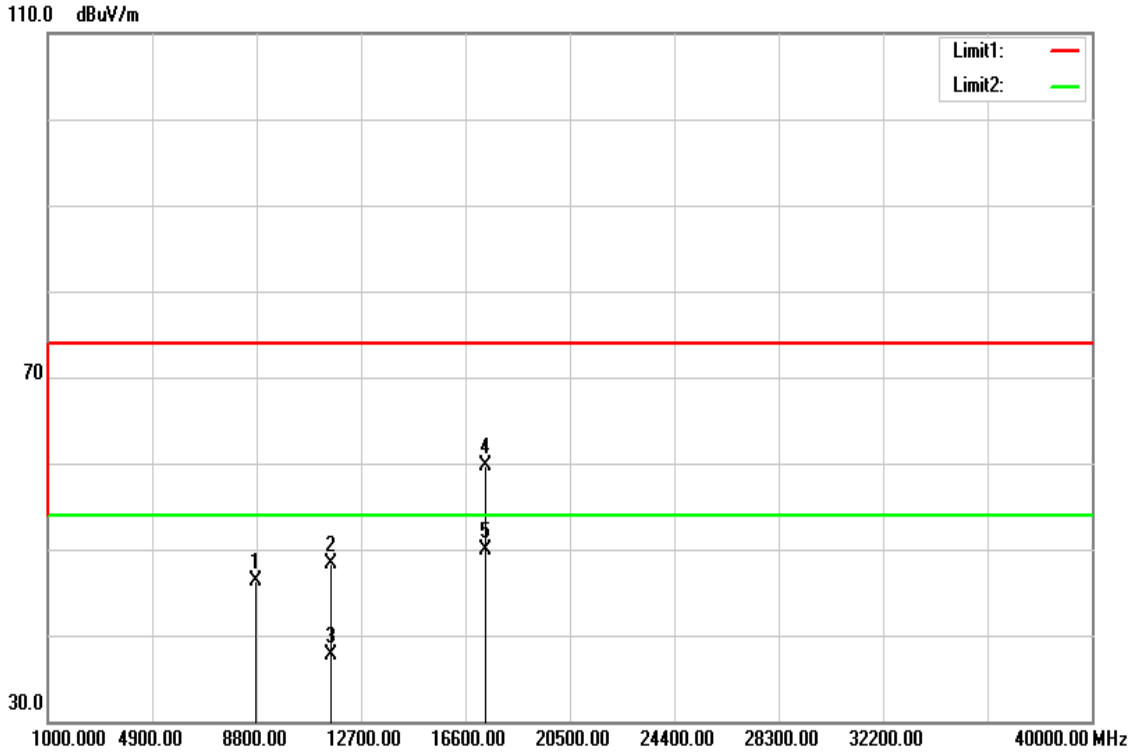



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8840.000 | 31.35 | 13.80 | 45.15 | 74.00 | -28.85 | peak |
| 11490.000 | 30.88 | 16.78 | 47.66 | 74.00 | -26.34 | peak |
| 11490.000 | 19.46 | 16.78 | 36.24 | 54.00 | -17.76 | AVG |
| 17235.000 | 35.15 | 25.28 | 60.43 | 74.00 | -13.57 | peak |
| 17235.000 | 26.69 | 25.28 | 51.97 | 54.00 | -2.03 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

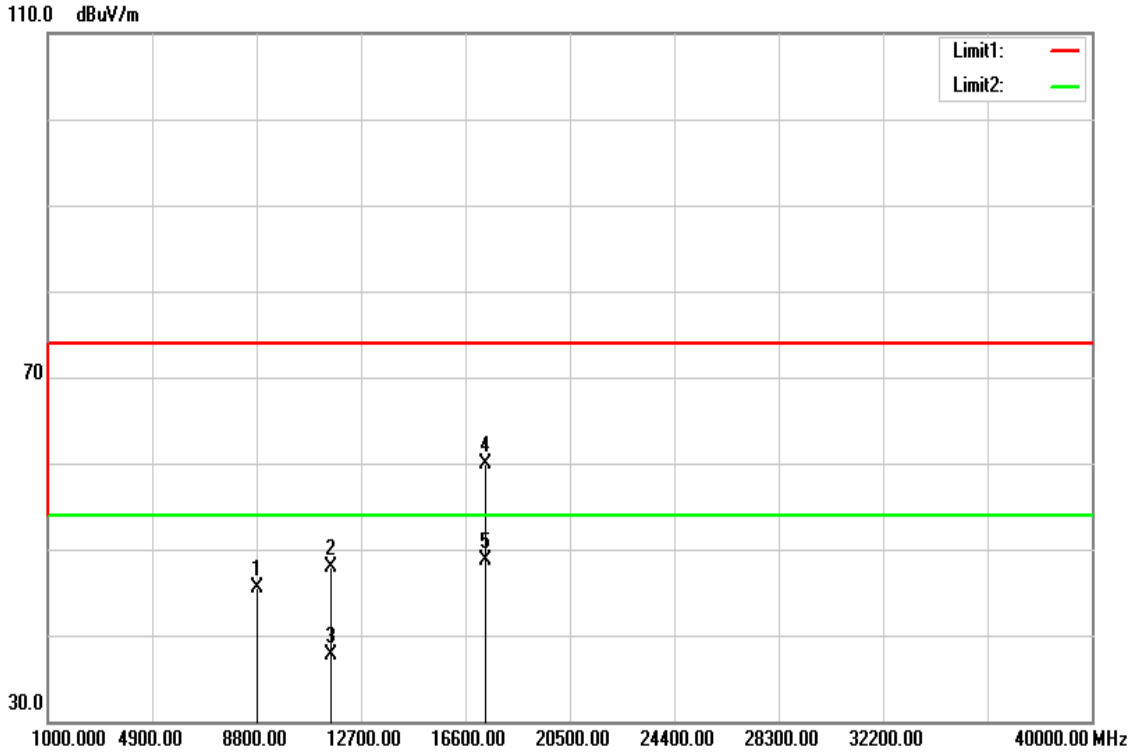



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.55 | 13.75 | 46.30 | 74.00 | -27.70 | peak |
| 11570.000 | 31.39 | 16.84 | 48.23 | 74.00 | -25.77 | peak |
| 11570.000 | 20.80 | 16.84 | 37.64 | 54.00 | -16.36 | AVG |
| 17355.000 | 33.88 | 25.75 | 59.63 | 74.00 | -14.37 | peak |
| 17355.000 | 24.12 | 25.75 | 49.87 | 54.00 | -4.13 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

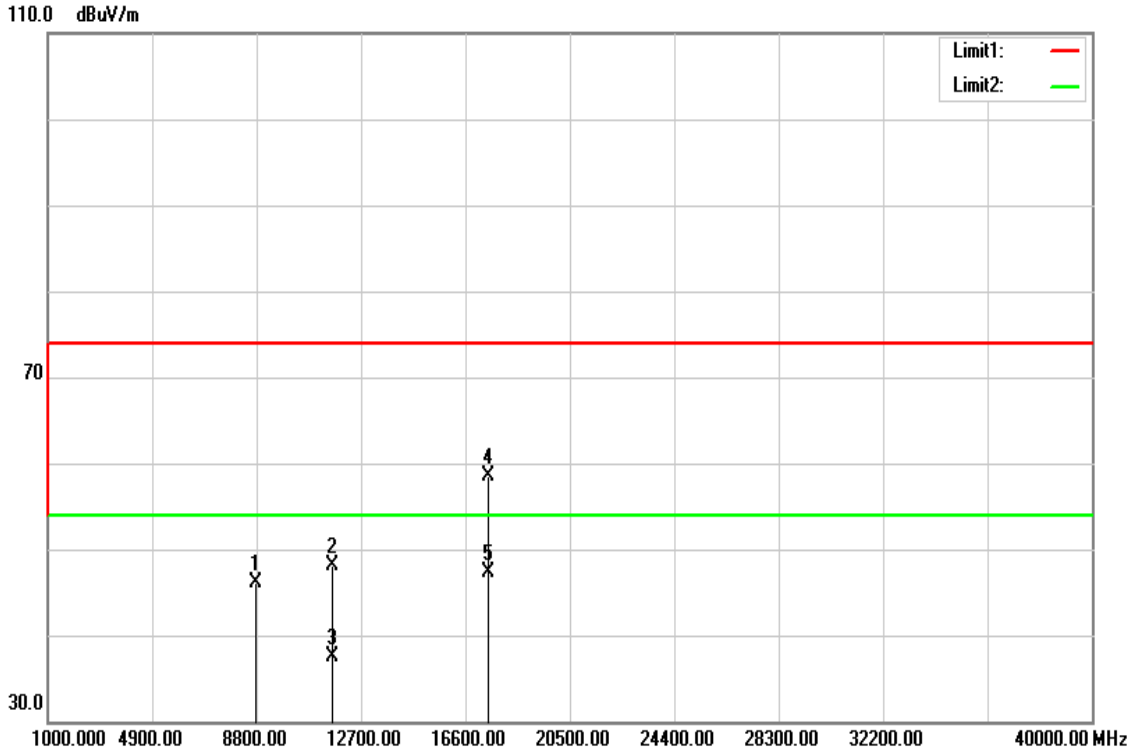



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8840.000 | 31.80 | 13.80 | 45.60 | 74.00 | -28.40 | peak |
| 11570.000 | 31.16 | 16.84 | 48.00 | 74.00 | -26.00 | peak |
| 11570.000 | 20.81 | 16.84 | 37.65 | 54.00 | -16.35 | AVG |
| 17355.000 | 34.12 | 25.75 | 59.87 | 74.00 | -14.13 | peak |
| 17355.000 | 22.88 | 25.75 | 48.63 | 54.00 | -5.37 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

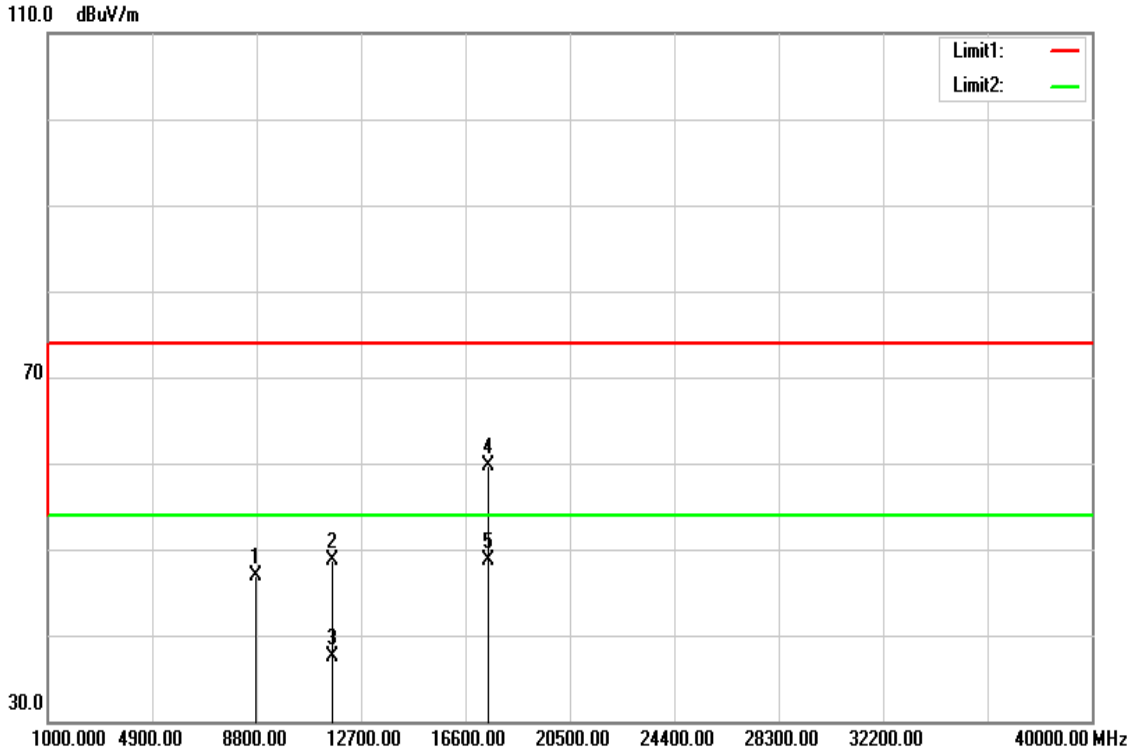



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 32.38 | 13.75 | 46.13 | 74.00 | -27.87 | peak |
| 11650.000 | 31.24 | 16.91 | 48.15 | 74.00 | -25.85 | peak |
| 11650.000 | 20.67 | 16.91 | 37.58 | 54.00 | -16.42 | AVG |
| 17475.000 | 32.38 | 26.22 | 58.60 | 74.00 | -15.40 | peak |
| 17475.000 | 21.05 | 26.22 | 47.27 | 54.00 | -6.73 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11a High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

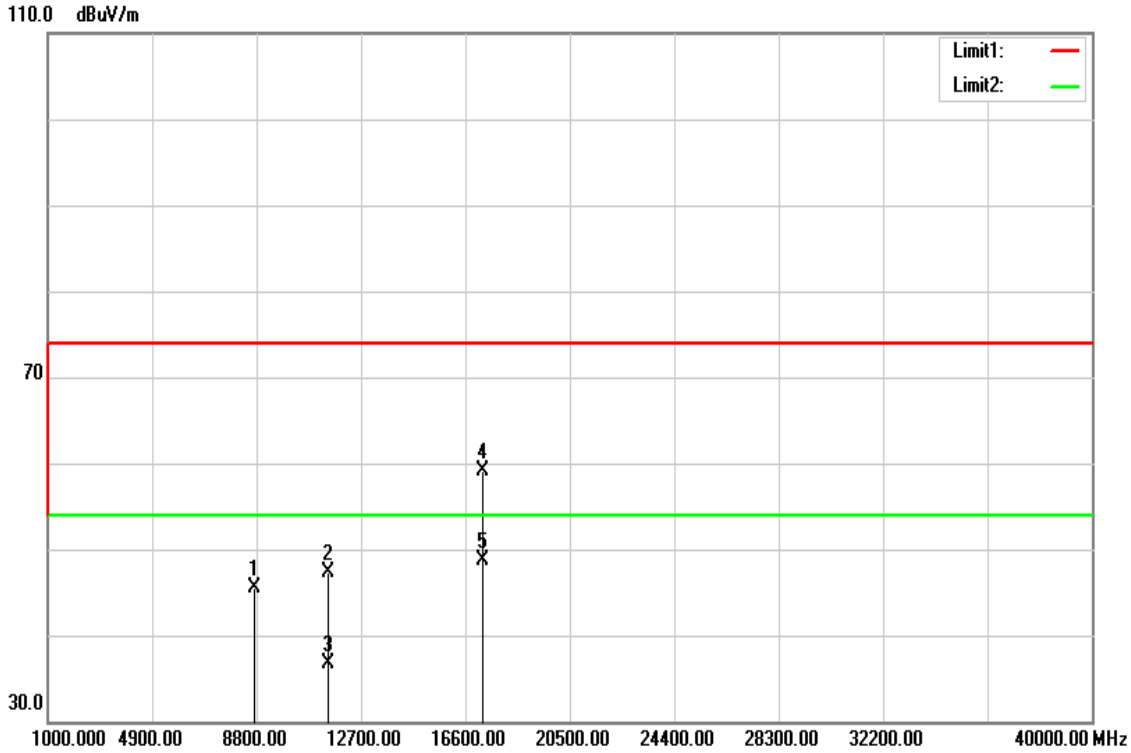



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8750.000 | 33.08 | 13.75 | 46.83 | 74.00 | -27.17 | peak |
| 11650.000 | 31.86 | 16.91 | 48.77 | 74.00 | -25.23 | peak |
| 11650.000 | 20.64 | 16.91 | 37.55 | 54.00 | -16.45 | AVG |
| 17475.000 | 33.48 | 26.22 | 59.70 | 74.00 | -14.30 | peak |
| 17475.000 | 22.41 | 26.22 | 48.63 | 54.00 | -5.37 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

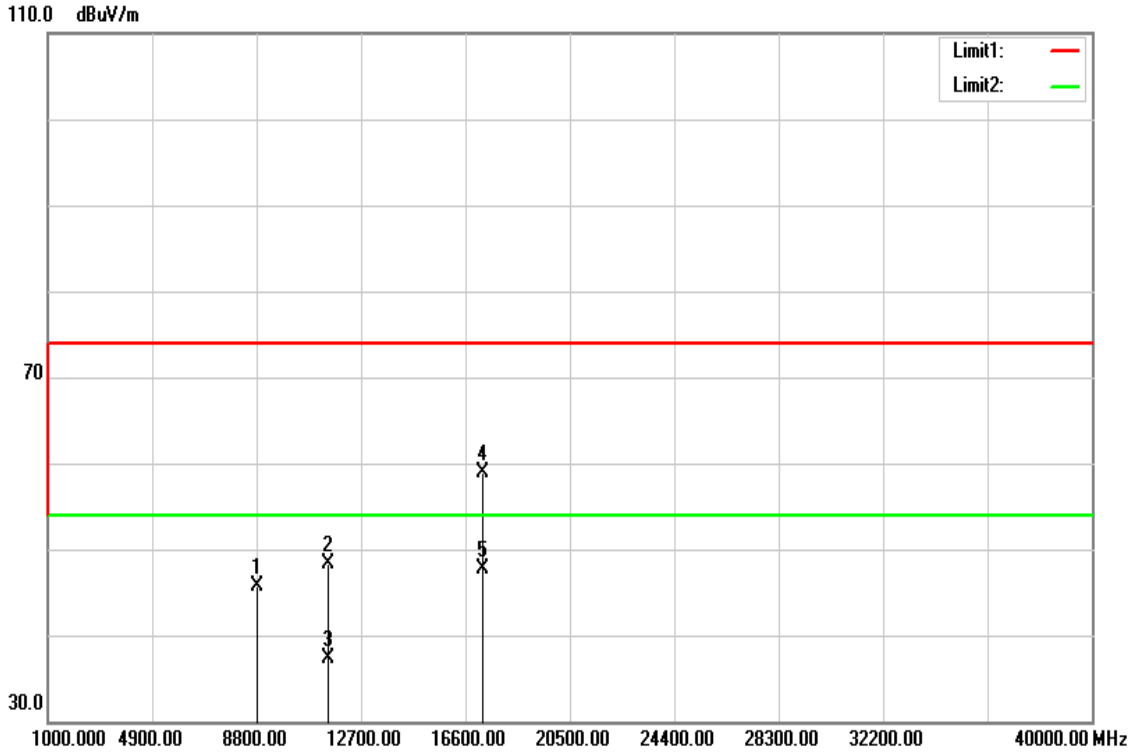



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8730.000 | 31.83 | 13.75 | 45.58 | 74.00 | -28.42 | peak |
| 11490.000 | 30.61 | 16.78 | 47.39 | 74.00 | -26.61 | peak |
| 11490.000 | 20.00 | 16.78 | 36.78 | 54.00 | -17.22 | AVG |
| 17235.000 | 33.73 | 25.28 | 59.01 | 74.00 | -14.99 | peak |
| 17235.000 | 23.48 | 25.28 | 48.76 | 54.00 | -5.24 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

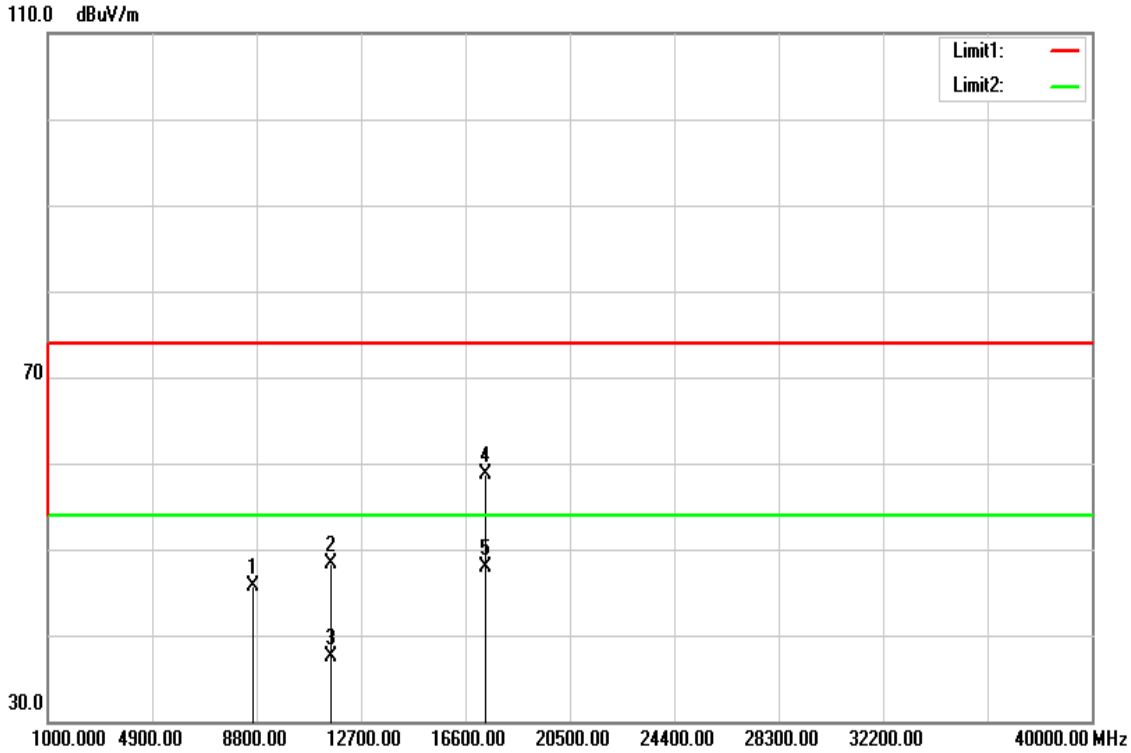



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8830.000 | 31.90 | 13.79 | 45.69 | 74.00 | -28.31 | peak |
| 11490.000 | 31.60 | 16.78 | 48.38 | 74.00 | -25.62 | peak |
| 11490.000 | 20.46 | 16.78 | 37.24 | 54.00 | -16.76 | AVG |
| 17235.000 | 33.54 | 25.28 | 58.82 | 74.00 | -15.18 | peak |
| 17235.000 | 22.41 | 25.28 | 47.69 | 54.00 | -6.31 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

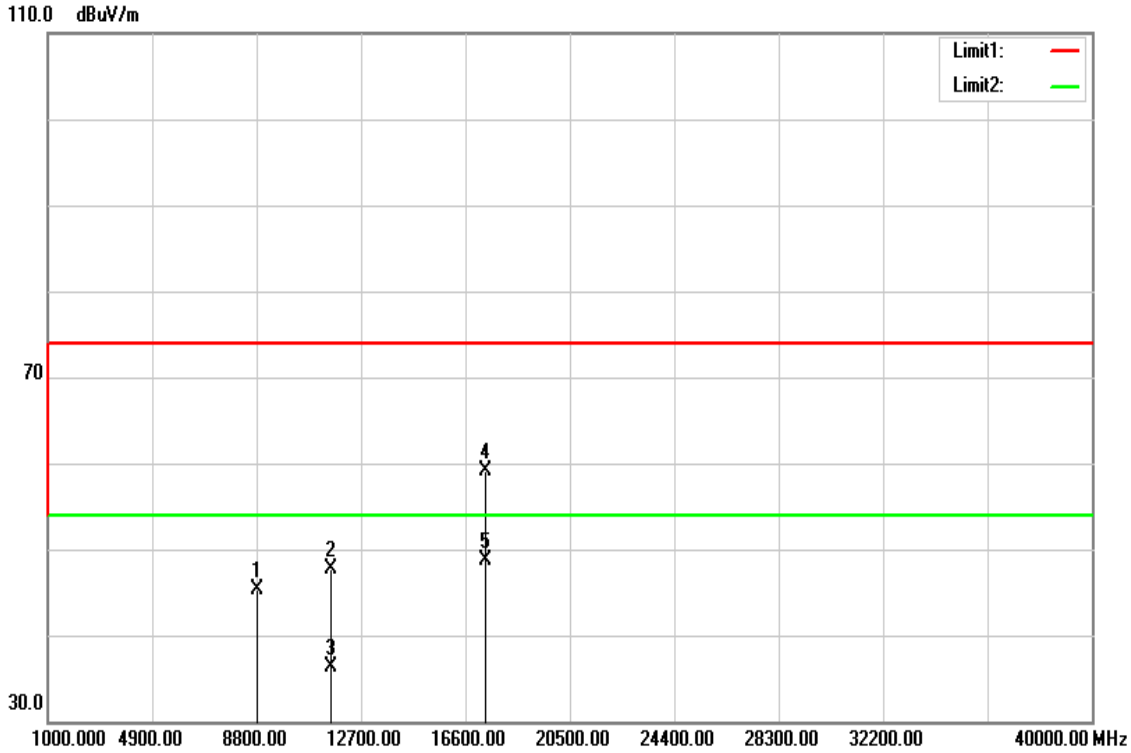



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8660.000 | 32.03 | 13.71 | 45.74 | 74.00 | -28.26 | peak |
| 11570.000 | 31.50 | 16.84 | 48.34 | 74.00 | -25.66 | peak |
| 11570.000 | 20.65 | 16.84 | 37.49 | 54.00 | -16.51 | AVG |
| 17355.000 | 32.93 | 25.75 | 58.68 | 74.00 | -15.32 | peak |
| 17355.000 | 22.08 | 25.75 | 47.83 | 54.00 | -6.17 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

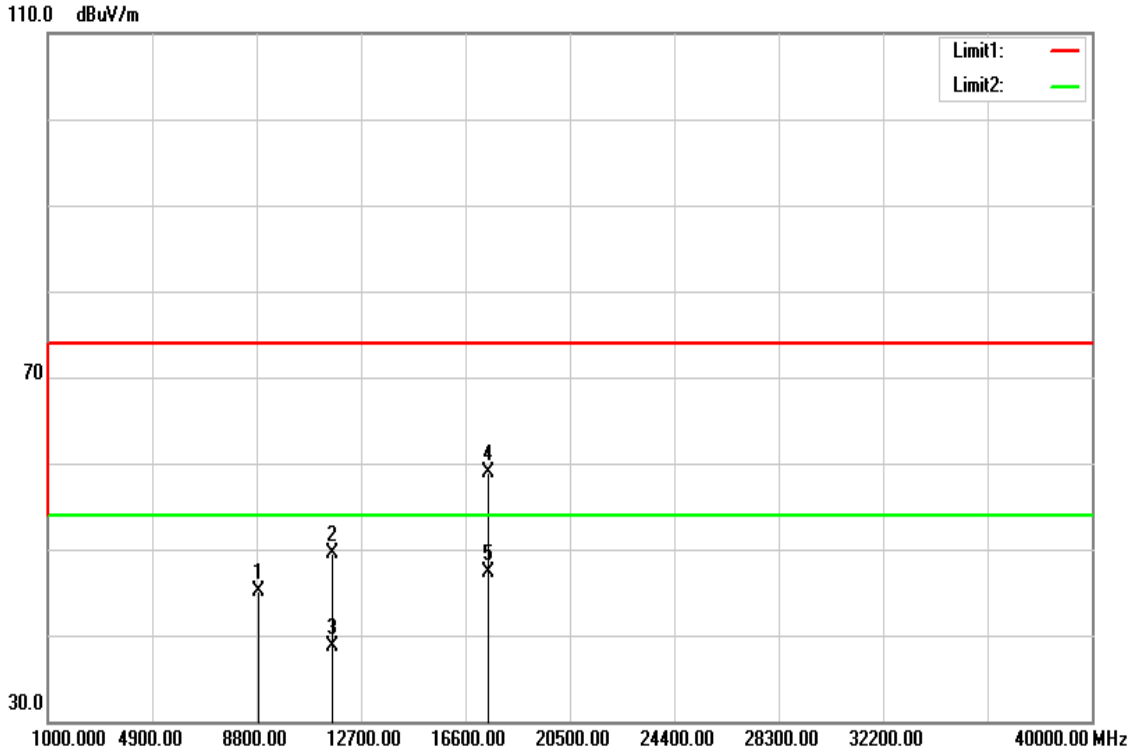



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8830.000 | 31.61 | 13.79 | 45.40 | 74.00 | -28.60 | peak |
| 11570.000 | 30.91 | 16.84 | 47.75 | 74.00 | -26.25 | peak |
| 11570.000 | 19.44 | 16.84 | 36.28 | 54.00 | -17.72 | AVG |
| 17355.000 | 33.39 | 25.75 | 59.14 | 74.00 | -14.86 | peak |
| 17355.000 | 22.94 | 25.75 | 48.69 | 54.00 | -5.31 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

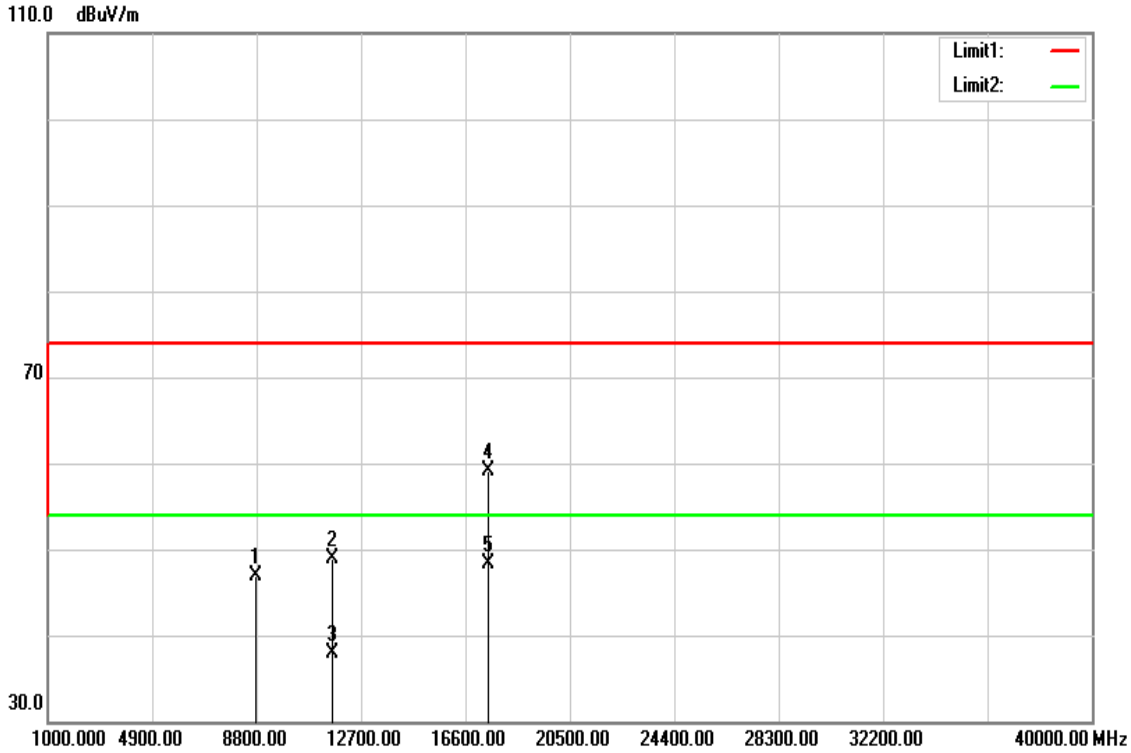



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8860.000 | 31.32 | 13.81 | 45.13 | 74.00 | -28.87 | peak |
| 11650.000 | 32.66 | 16.91 | 49.57 | 74.00 | -24.43 | peak |
| 11650.000 | 21.73 | 16.91 | 38.64 | 54.00 | -15.36 | AVG |
| 17475.000 | 32.64 | 26.22 | 58.86 | 74.00 | -15.14 | peak |
| 17475.000 | 21.00 | 26.22 | 47.22 | 54.00 | -6.78 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

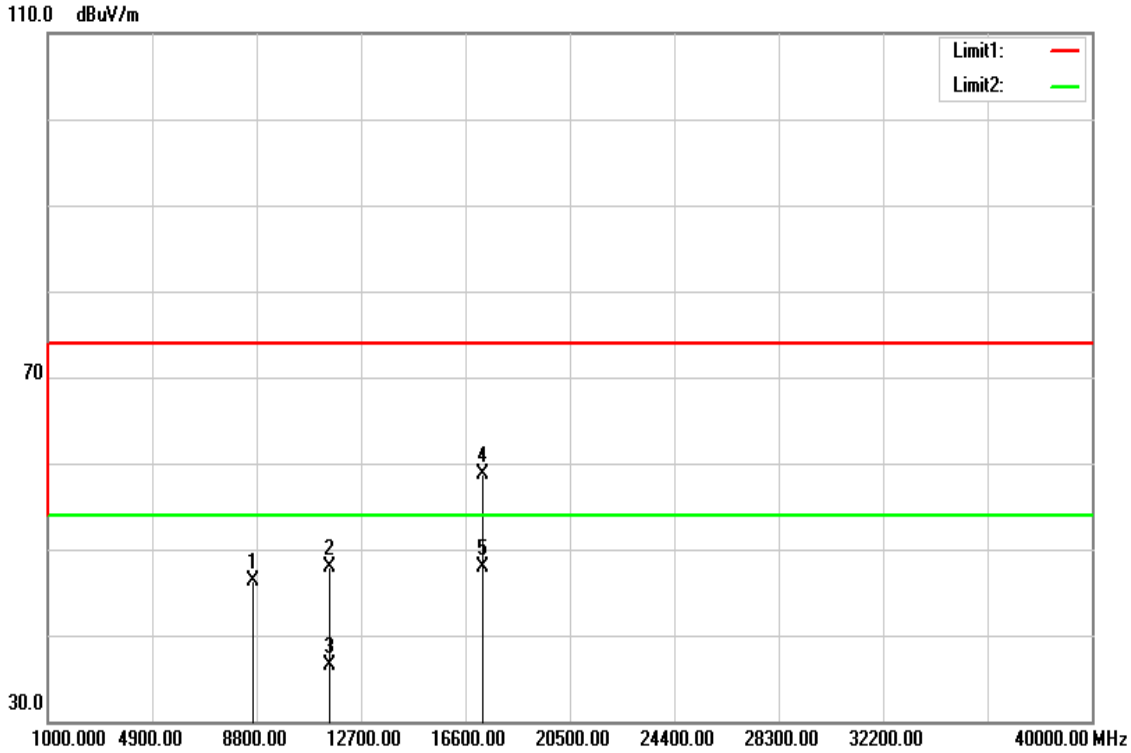



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8760.000 | 33.19 | 13.76 | 46.95 | 74.00 | -27.05 | peak |
| 11650.000 | 32.03 | 16.91 | 48.94 | 74.00 | -25.06 | peak |
| 11650.000 | 20.91 | 16.91 | 37.82 | 54.00 | -16.18 | AVG |
| 17475.000 | 32.86 | 26.22 | 59.08 | 74.00 | -14.92 | peak |
| 17475.000 | 22.15 | 26.22 | 48.37 | 54.00 | -5.63 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

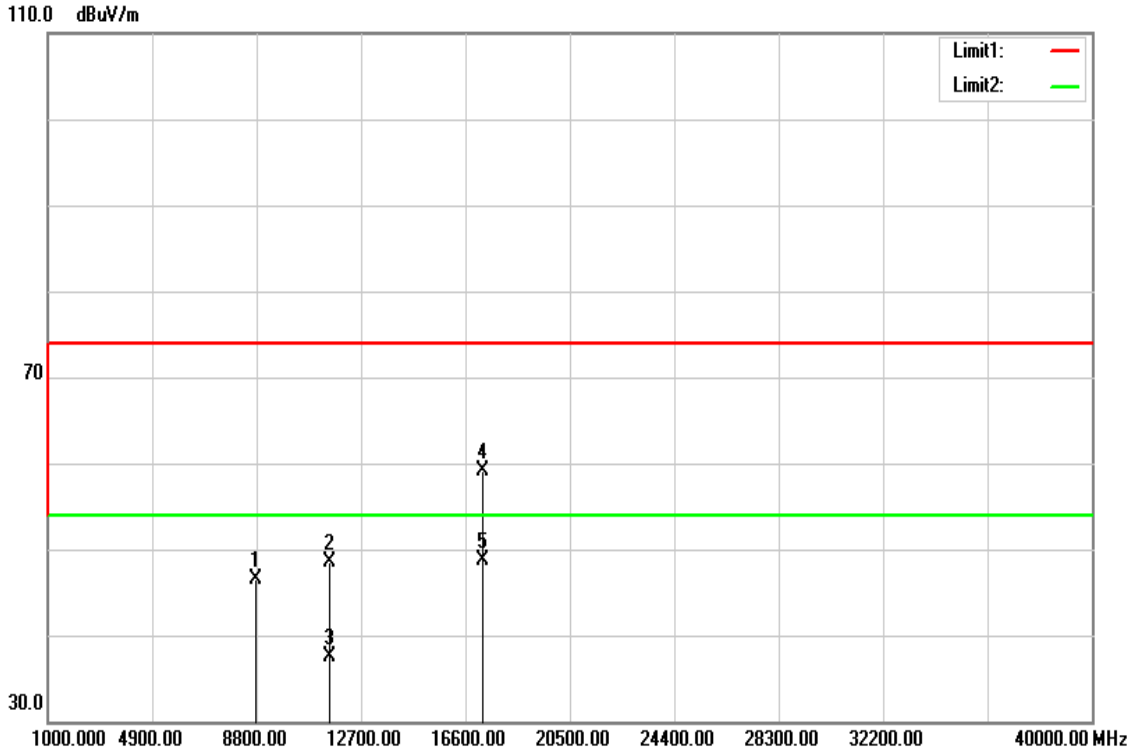



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8670.000 | 32.60 | 13.72 | 46.32 | 74.00 | -27.68 | peak |
| 11510.000 | 31.19 | 16.79 | 47.98 | 74.00 | -26.02 | peak |
| 11510.000 | 19.79 | 16.79 | 36.58 | 54.00 | -17.42 | AVG |
| 17265.000 | 33.23 | 25.40 | 58.63 | 74.00 | -15.37 | peak |
| 17265.000 | 22.44 | 25.40 | 47.84 | 54.00 | -6.16 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40 Low CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

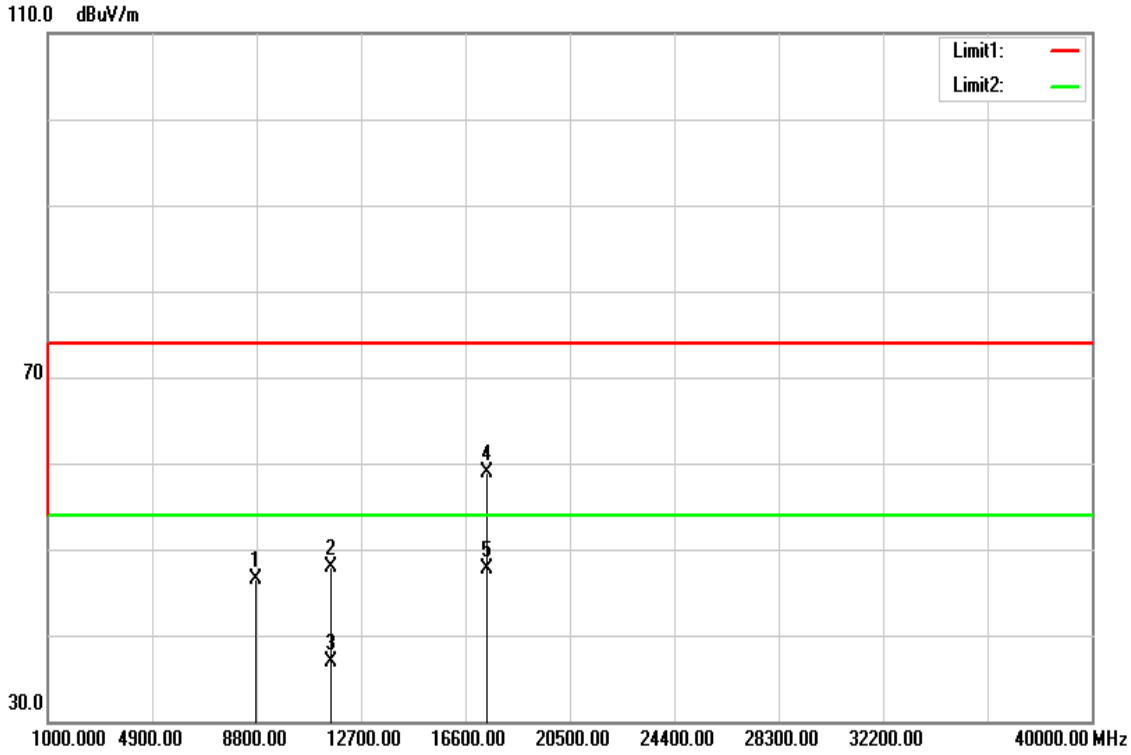



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8790.000 | 32.81 | 13.77 | 46.58 | 74.00 | -27.42 | peak |
| 11510.000 | 31.64 | 16.79 | 48.43 | 74.00 | -25.57 | peak |
| 11510.000 | 20.79 | 16.79 | 37.58 | 54.00 | -16.42 | AVG |
| 17265.000 | 33.77 | 25.40 | 59.17 | 74.00 | -14.83 | peak |
| 17265.000 | 23.29 | 25.40 | 48.69 | 54.00 | -5.31 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40<br>High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

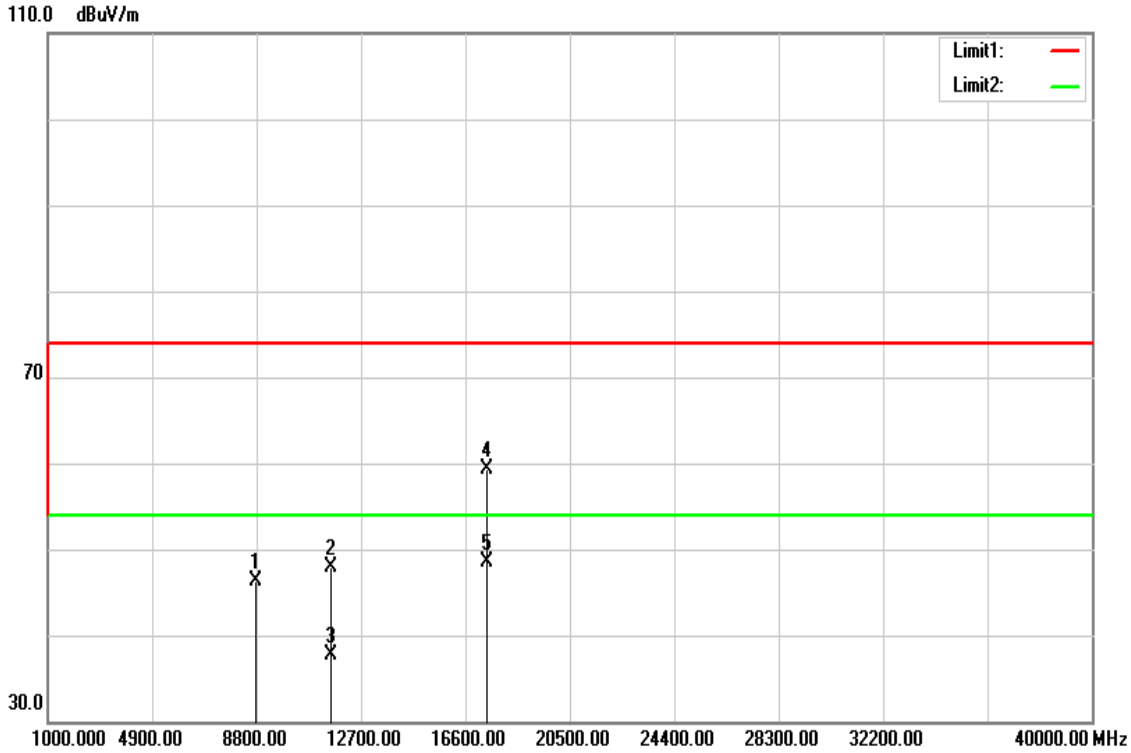



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8780.000 | 32.68 | 13.77 | 46.45 | 74.00 | -27.55 | peak |
| 11590.000 | 31.06 | 16.86 | 47.92 | 74.00 | -26.08 | peak |
| 11590.000 | 19.99 | 16.86 | 36.85 | 54.00 | -17.15 | AVG |
| 17385.000 | 33.00 | 25.87 | 58.87 | 74.00 | -15.13 | peak |
| 17385.000 | 21.76 | 25.87 | 47.63 | 54.00 | -6.37 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11n HT40<br>High CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

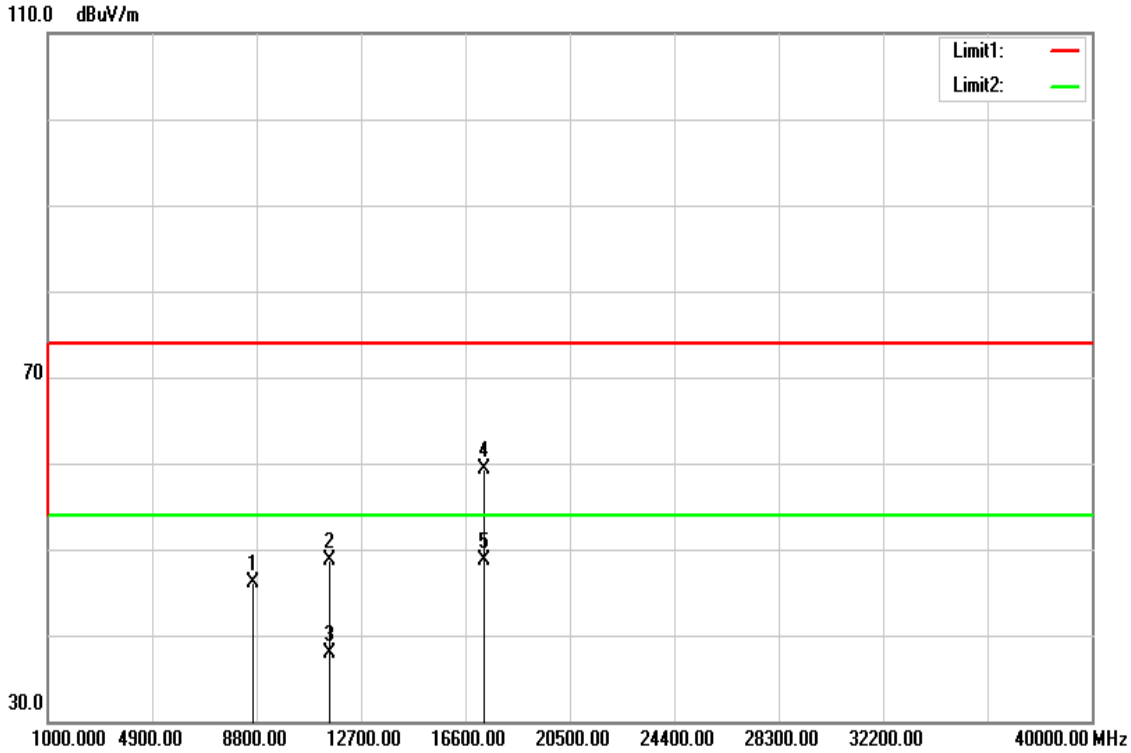



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8770.000 | 32.61 | 13.76 | 46.37 | 74.00 | -27.63 | peak |
| 11590.000 | 31.14 | 16.86 | 48.00 | 74.00 | -26.00 | peak |
| 11590.000 | 20.82 | 16.86 | 37.68 | 54.00 | -16.32 | AVG |
| 17385.000 | 33.46 | 25.87 | 59.33 | 74.00 | -14.67 | peak |
| 17385.000 | 22.60 | 25.87 | 48.47 | 54.00 | -5.53 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Vertical | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |

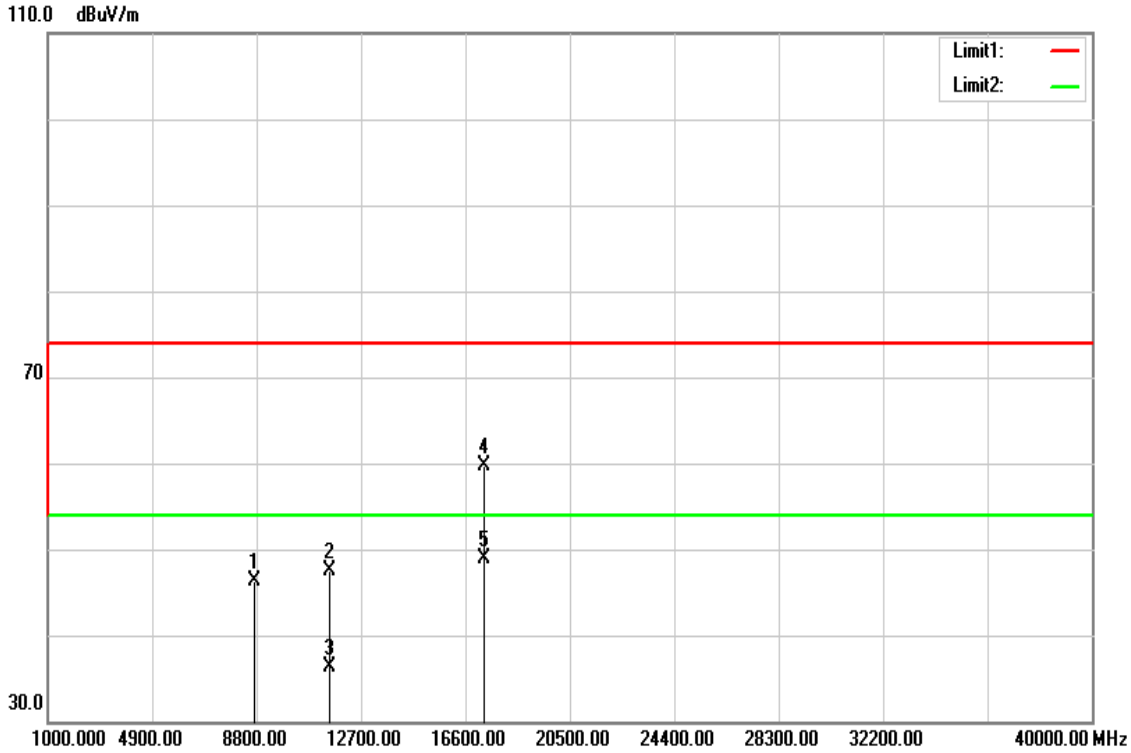



| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8690.000 | 32.37 | 13.73 | 46.10 | 74.00 | -27.90 | peak |
| 11550.000 | 31.91 | 16.82 | 48.73 | 74.00 | -25.27 | peak |
| 11550.000 | 21.04 | 16.82 | 37.86 | 54.00 | -16.14 | AVG |
| 17325.000 | 33.73 | 25.63 | 59.36 | 74.00 | -14.64 | peak |
| 17325.000 | 23.11 | 25.63 | 48.74 | 54.00 | -5.26 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

| Test Mode | IEEE 802.11ac VHT80 Mid CH | Temp/Hum | 22(℃)/ 35%RH |
|---|---|---|---|
| Test Item | Harmonic | Test Date | May 22, 2017 |
| Polarize | Horizontal | Test Engineer | Ed.Chiang |
| Detector | Peak and Average | Test Voltage | 120Vac / 60Hz |




| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|
| 8720.000 | 32.47 | 13.74 | 46.21 | 74.00 | -27.79 | peak |
| 11550.000 | 30.64 | 16.82 | 47.46 | 74.00 | -26.54 | peak |
| 11550.000 | 19.45 | 16.82 | 36.27 | 54.00 | -17.73 | AVG |
| 17325.000 | 34.02 | 25.63 | 59.65 | 74.00 | -14.35 | peak |
| 17325.000 | 23.31 | 25.63 | 48.94 | 54.00 | -5.06 | AVG |

***Remark:***

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

# 4.6 FREQUENCY STABILITY

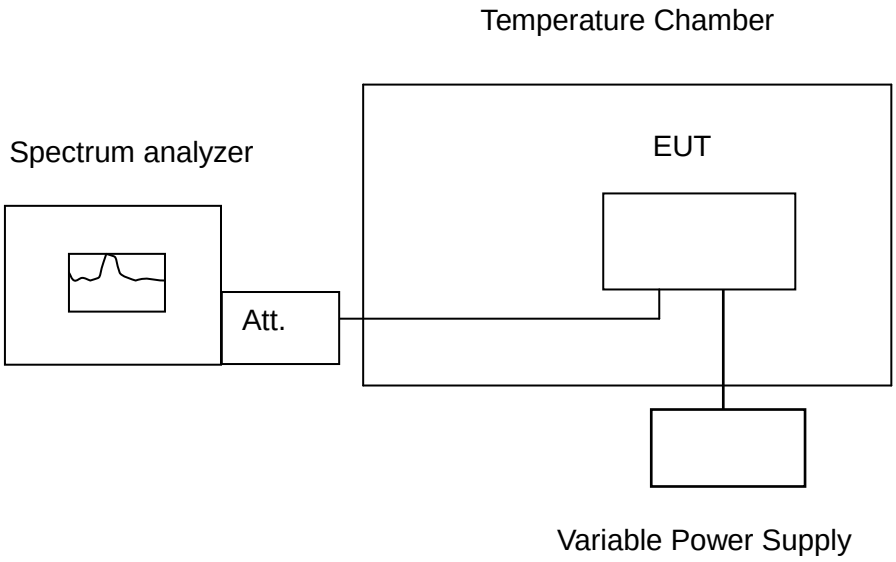
## 4.6.1 Test Limit

According to §15.407(g) manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

## 4.6.2 Test Procedure

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20$^{o}$C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to –20$^{o}$C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10$^{o}$C increased per stage until the highest temperature of +50$^{o}$C reached.

## 4.6.3 Test Setup



## 4.6.4 Test Result

| Temp. (°C) | Voltage (V) | Measured Frequency | 5180 | | (MHz) | Limit | | | | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 50 | 5 | 5180.11032 | 5180.11240 | 5180.11120 | 5180.11090 | 21.2973 | 21.6988 | 21.4672 | 21.4093 | Pass |
| 40 | 5 | 5180.10951 | 5180.10951 | 5180.10942 | 5180.10231 | 21.1409 | 21.1416 | 21.1241 | 19.7510 | Pass |
| 30 | 5 | 5180.08012 | 5180.08041 | 5180.07064 | 5180.07096 | 15.4678 | 15.5236 | 13.6373 | 13.6996 | Pass |
| 20 | 5 | 5180.08053 | 5180.07056 | 5180.05064 | 5180.06051 | 15.5465 | 13.6218 | 9.7768 | 11.6820 | Pass |
| 10 | 5 | 5180.04356 | 5180.04321 | 5180.04615 | 5180.03146 | 8.4100 | 8.3421 | 8.9083 | 6.0726 | Pass |
| 0 | 5 | 5180.02185 | 5180.02549 | 5180.03456 | 5180.02730 | 4.2191 | 4.9200 | 6.6721 | 5.2703 | Pass |
| -10 | 5 | 5180.00146 | 5180.00373 | 5180.00484 | 5180.07879 | 0.2811 | 0.7205 | 0.9346 | 15.2106 | Pass |
| -20 | 5 | 5179.98083 | 5179.97863 | 5179.95351 | 5179.94545 | -3.7006 | -4.1253 | -8.9745 | -10.5303 | Pass |
| Temp. (°C) | Voltage (V) | Measured Frequency | 5180 | | (MHz) | Limit | | | | Result |
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 20 | 4.5 | 5180.085643 | 5180.08525 | 5180.05783 | 5180.06354 | 16.5333 | 16.4581 | 11.1646 | 12.2670 | Pass |
| 20 | 5 | 5180.085483 | 5180.07549 | 5180.05064 | 5180.06518 | 16.5025 | 14.5726 | 9.7768 | 12.5833 | Pass |
| 20 | 5.5 | 5180.084943 | 5180.06127 | 5180.06361 | 5180.07655 | 16.3983 | 11.8272 | 12.2803 | 14.7776 | Pass |

| Temp. (°C) | Voltage (V) | Measured Frequency | 5260 | | (MHz) | Limit | | | | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 50 | 5 | 5260.09621 | 5260.08366 | 5260.08524 | 5260.08785 | 18.2916 | 15.9042 | 16.2053 | 16.7015 | Pass |
| 40 | 5 | 5260.07462 | 5260.07560 | 5260.06146 | 5260.06154 | 14.1869 | 14.3726 | 11.6837 | 11.6996 | Pass |
| 30 | 5 | 5260.06206 | 5260.04027 | 5260.04146 | 5260.05145 | 11.7977 | 7.6550 | 7.8814 | 9.7814 | Pass |
| 20 | 5 | 5260.04056 | 5260.04027 | 5260.03065 | 5260.02065 | 7.7103 | 7.6549 | 5.8278 | 3.9267 | Pass |
| 10 | 5 | 5260.01060 | 5260.03067 | 5260.02065 | 5260.03054 | 2.0152 | 5.8298 | 3.9266 | 5.8061 | Pass |
| 0 | 5 | 5260.00065 | 5260.00107 | 5260.00404 | 5260.00654 | 0.1243 | 0.2025 | 0.7681 | 1.2433 | Pass |
| -10 | 5 | 5259.96068 | 5259.96585 | 5259.96535 | 5259.96415 | -7.4753 | -6.4918 | -6.5875 | -6.8156 | Pass |
| -20 | 5 | 5259.95880 | 5259.95298 | 5259.95654 | 5259.95356 | -7.8327 | -8.9384 | -8.2622 | -8.8289 | Pass |
| Temp. (°C) | Voltage (V) | Measured Frequency | 5260 | | (MHz) | Limit | | | | Result |
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 20 | 4.5 | 5260.04064 | 5260.04064 | 5260.03454 | 5260.03056 | 7.7262 | 7.7262 | 6.5665 | 5.8095 | Pass |
| 20 | 5 | 5260.04985 | 5260.04589 | 5260.03058 | 5260.02055 | 9.4770 | 8.7251 | 5.8144 | 3.9064 | Pass |
| 20 | 5.5 | 5260.05165 | 5260.05269 | 5260.05456 | 5260.05544 | 9.8202 | 10.0179 | 10.3726 | 10.5399 | Pass |

| Temp. (°C) | Voltage (V) | Measured Frequency | 5500 | | (MHz) | Limit | | | | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 50 | 5 | 5500.09654 | 5500.09364 | 5500.09650 | 5500.09655 | 17.5527 | 17.0255 | 17.5455 | 17.5543 | Pass |
| 40 | 5 | 5500.10064 | 5500.10054 | 5500.10065 | 5500.10065 | 18.2990 | 18.2800 | 18.3007 | 18.2995 | Pass |
| 30 | 5 | 5500.10145 | 5500.10654 | 5500.10642 | 5500.10453 | 18.4445 | 19.3709 | 19.3493 | 19.0062 | Pass |
| 20 | 5 | 5500.07619 | 5500.07174 | 5500.07492 | 5500.07465 | 13.8524 | 13.0438 | 13.6215 | 13.5727 | Pass |
| 10 | 5 | 5500.06253 | 5500.06541 | 5500.06542 | 5500.06658 | 11.3698 | 11.8935 | 11.8938 | 12.1062 | Pass |
| 0 | 5 | 5500.05534 | 5500.05517 | 5500.05465 | 5500.05654 | 10.0618 | 10.0306 | 9.9364 | 10.2807 | Pass |
| -10 | 5 | 5500.03164 | 5500.03546 | 5500.03255 | 5500.03864 | 5.7527 | 6.4466 | 5.9184 | 7.0255 | Pass |
| -20 | 5 | 5500.00895 | 5500.00541 | 5500.00585 | 5500.00675 | 1.6273 | 0.9844 | 1.0645 | 1.2273 | Pass |
| Temp. (°C) | Voltage (V) | Measured Frequency | 5500 | | (MHz) | Limit | | | | Result |
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 20 | 4.5 | 5500.07265 | 5500.07366 | 5500.07545 | 5500.07521 | 13.2091 | 13.3925 | 13.7184 | 13.6753 | Pass |
| 20 | 5 | 5500.07254 | 5500.07150 | 5500.07562 | 5500.07425 | 13.1891 | 13.0002 | 13.7491 | 13.5000 | Pass |
| 20 | 5.5 | 5500.06620 | 5500.06561 | 5500.06655 | 5500.02654 | 12.0371 | 11.9291 | 12.1007 | 4.8255 | Pass |

| Temp. (°C) | Voltage (V) | Measured Frequency | 5180 | | (MHz) | Limit | | | | Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 50 | 5 | 5745.10945 | 5745.11068 | 5745.11214 | 5745.10065 | 19.0520 | 19.2654 | 19.5196 | 17.5196 | Pass |
| 40 | 5 | 5745.09498 | 5745.09494 | 5745.09651 | 5745.09987 | 16.5326 | 16.5258 | 16.7990 | 17.3838 | Pass |
| 30 | 5 | 5745.08984 | 5745.08840 | 5745.08925 | 5745.07168 | 15.6379 | 15.3880 | 15.5345 | 12.4769 | Pass |
| 20 | 5 | 5745.07574 | 5745.07794 | 5745.07724 | 5745.07903 | 13.1836 | 13.5666 | 13.4447 | 13.7558 | Pass |
| 10 | 5 | 5745.05529 | 5745.05187 | 5745.05417 | 5745.05411 | 9.6235 | 9.0280 | 9.4288 | 9.4193 | Pass |
| 0 | 5 | 5745.03145 | 5745.03482 | 5745.03687 | 5745.03462 | 5.4743 | 6.0602 | 6.4179 | 6.0258 | Pass |
| -10 | 5 | 5745.00687 | 5745.00581 | 5745.00926 | 5745.00849 | 1.1961 | 1.0108 | 1.6125 | 1.4777 | Pass |
| -20 | 5 | 5745.00045 | 5745.00015 | 5745.00047 | 5745.00036 | 0.0783 | 0.0254 | 0.0815 | 0.0618 | Pass |
| Temp. (°C) | Voltage (V) | Measured Frequency | 5180 | | (MHz) | Limit | | | | Result |
| | | Time (min) | | | | 20ppm | | | | |
| Operating Frequency: | | 0 min | 2 min | 5 min | 10 min | 0 min | 2 min | 5 min | 10 min | |
| 20 | 4.5 | 5745.06549 | 5745.06649 | 5745.06486 | 5745.06499 | 11.3990 | 11.5732 | 11.2898 | 11.3119 | Pass |
| 20 | 5 | 5745.07665 | 5745.07168 | 5745.07645 | 5745.07195 | 13.3420 | 12.4769 | 13.3072 | 12.5231 | Pass |
| 20 | 5.5 | 5745.07987 | 5745.07681 | 5745.07684 | 5745.07687 | 13.9025 | 13.3702 | 13.3751 | 13.3803 | Pass |

# 4.7 DYNAMIC FREQUENCY SELECTION

## 4.7.1 Test Limit

FCC according to §15.407 (h), KDB 905462 D02 "compliance measurement procedures for unlicensed-national information infrastructure devices operating in the 5250-5350 MHz and 5470-5725 MHz bands incorporating dynamic frequency selection". and KDB 905462 D03 " U-NII client devices without radar detection capability.

IC according RSS-247 section 6.3, and it harmonized with FCC Part 15 DFS rules,

**Table 1: Applicability of DFS requirements prior to use of a channel**

| 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 2: Applicability of DFS requirements during normal operation**

| 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 mods | 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 3: Interference Threshold values, Master or Client incorporating In-Service**

| 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 4: DFS Response requirement values**

| 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 5 – 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 | |
| 1 | 1 | Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a | $\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$ | 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.

**Table 6 – Long Pulse Radar Test Signal**

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

**Table 7 – Frequency Hopping Radar Test Signal**

| Radar Type | Pulse Width (µsec) | PRI (µsec) | Pulses per Hop | Hopping Rate (kHz) | Hopping Sequence Length (msec) | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|---|---|---|---|---|---|---|---|
| 6 | 1 | 333 | 9 | 0.333 | 300 | 70% | 30 |

## 4.7.2 Test Procedure

**Overview Of EUT With Respect To §15.407 (H) Requirements**

The firmware installed in the EUT during testing was:

Firmware Rev: 2013.12.1117.2014
The EUT operates over the 5250-5350 MHz range as a Client Device that does not have radar detection capability.

The EUT uses one transmitter connected to two 50-ohm coaxial antenna ports via a diversity switch. Only one antenna port is connected to the test system since the EUT has one antenna only.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

The EUT utilizes the 802.11a architecture, with a nominal channel bandwidth of 20 MHz.

The rated output power of the Master unit is < 23dBm (EIRP). Therefore the required interference threshold level is -62 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is –62 + 5 = -57dBm.

The calibrated conducted DFS Detection Threshold level is set to -57 dBm. The tested level is lower than the required level hence it provides margin to the limit.

**Manufacturer’s Statement Regarding Uniform Channel Spreading**

The end product implements an automatic channel selection feature at startup such that operation commences on channels distributed across the entire set of allowed 5GHz channels. This feature will ensure uniform spreading is achieved while avoiding non-allowed channels due to prior radar events.

# TEST AND MEASUREMENT SYSTEM

## System Overview

The measurement system is based on a conducted test method.

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

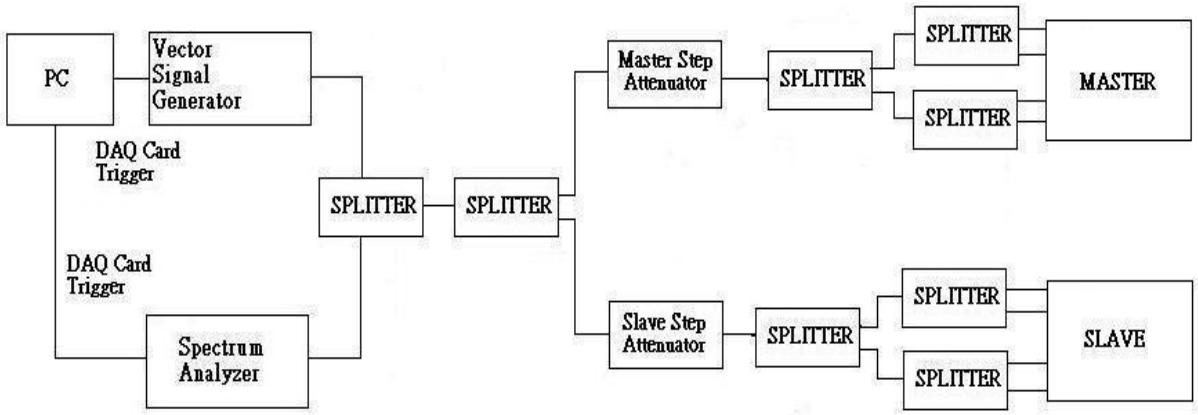
The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold. The time-domain resolution is 3 msec / bin with a 24 second sweep time, meeting the 22 second long pulse reporting criteria and allowing a minimum of 10 seconds after the end of the long pulse waveform.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), 50 ohm termination would be removed from the splitter so that connection can be established between splitter and the Master and/or Slave devices.

## Conducted Method System Block Diagram



## System Calibration

Connect the spectrum analyzer to the test system in place of the master device. Set the signal generator to CW mode. Adjust the amplitude of the signal generator to yield a measured level of –62 dBm on the spectrum analyzer.

Without changing any of the instrument settings, reconnect the spectrum analyzer to the Common port of the Spectrum Analyzer Combiner/Divider and connect a 50 ohm load to the Master Device port of the test system.

Measure the amplitude and calculate the difference from –62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference. Confirm that the signal is displayed at –62 dBm. Readjust the RBW and VBW to 3 MHz, set the span to 10 MHz, and confirm that the signal is still displayed at –62 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

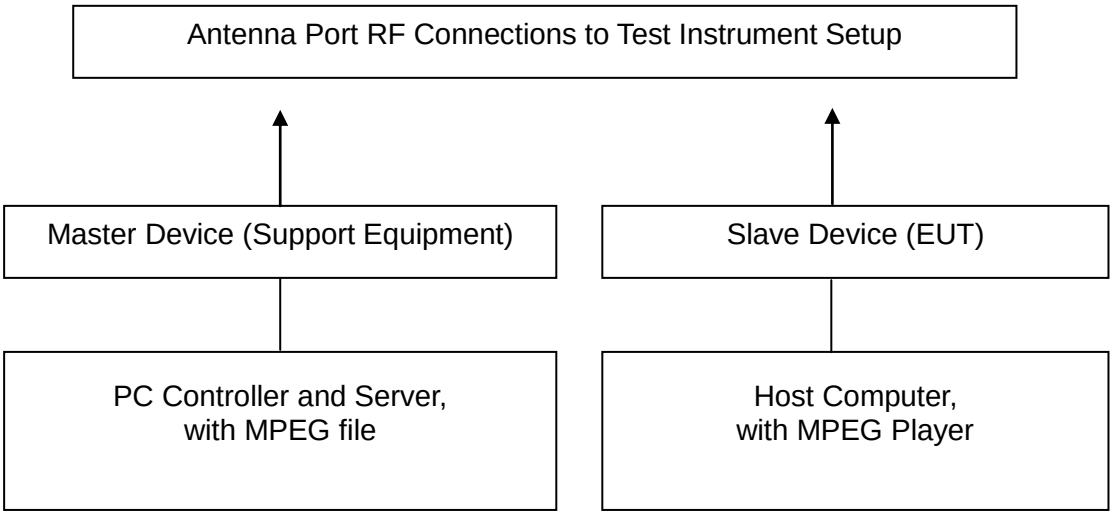
Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.

## Adjustment Of Displayed Traffic Level

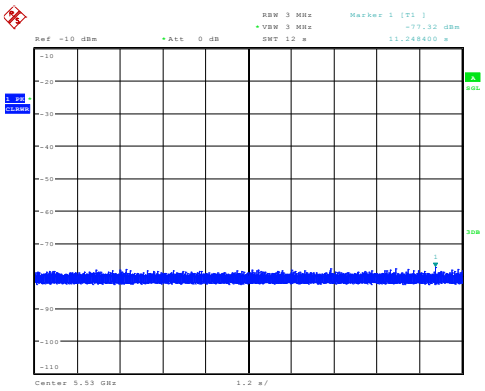
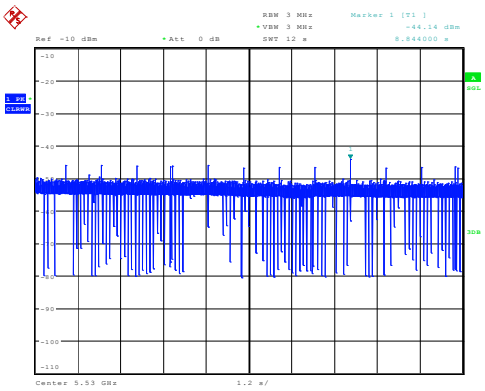
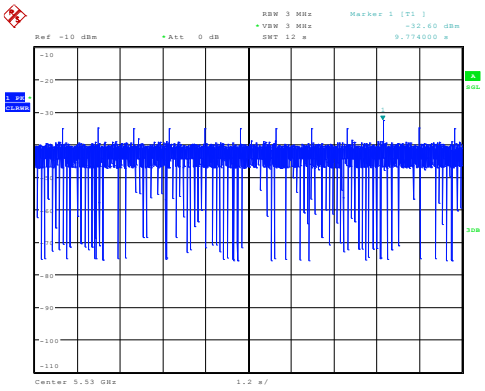
Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold. Confirm that the displayed traffic is from the Master Device. For Master Device testing confirm that the displayed traffic does not include Slave Device traffic. For Slave Device testing confirm that the displayed traffic does not include Master Device traffic.

If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

## 4.7.3 Test Setup

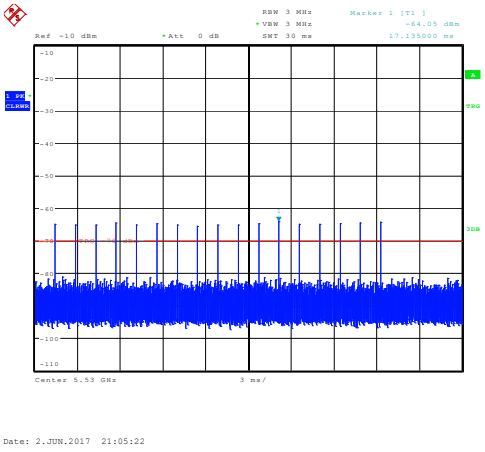


## 4.7.4 Test Result

| IEEE 802.11ac VHT80 MHz at 5530MHz | |
|---|---|
| Noise Floor | Master Level |
|  Date: 2.JUN.2017 23:05:58 |  Date: 2.JUN.2017 23:21:42 |
| Slave Level | |
|  Date: 2.JUN.2017 23:21:05 | |

## Radar Waveforms

### Sample of short Pluse Radar Type 0



# TEST CHANNEL AND METHOD

All tests were performed at a channel center frequency of 5530 MHz utilizing a conducted test method.

## CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME

### GENERAL REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

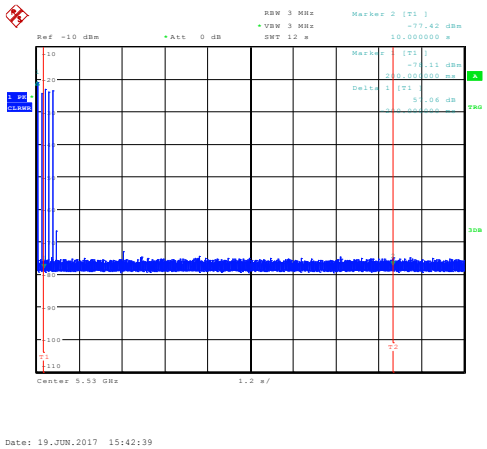
Aggregate Transmission Time =

(Number of analyzer bins showing transmission) * (dwell time per bin)

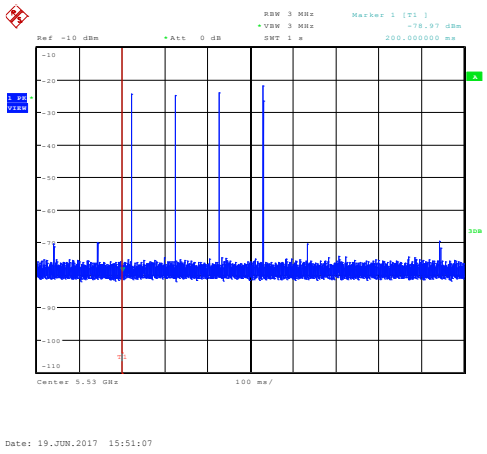
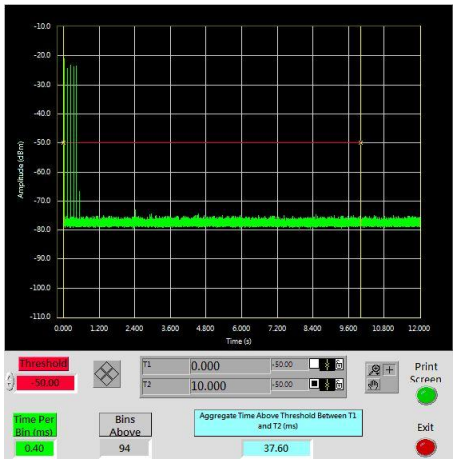
The observation period over which the aggregate time is calculated

Begins at (Reference Marker + 200 msec) and

Ends no earlier than (Reference Marker + 10 sec).

| IEEE 802.11ac VHT 80 MHz at 5530 | |
|---|---|
| **Type 1_Channel Move Time** | |
|  | |

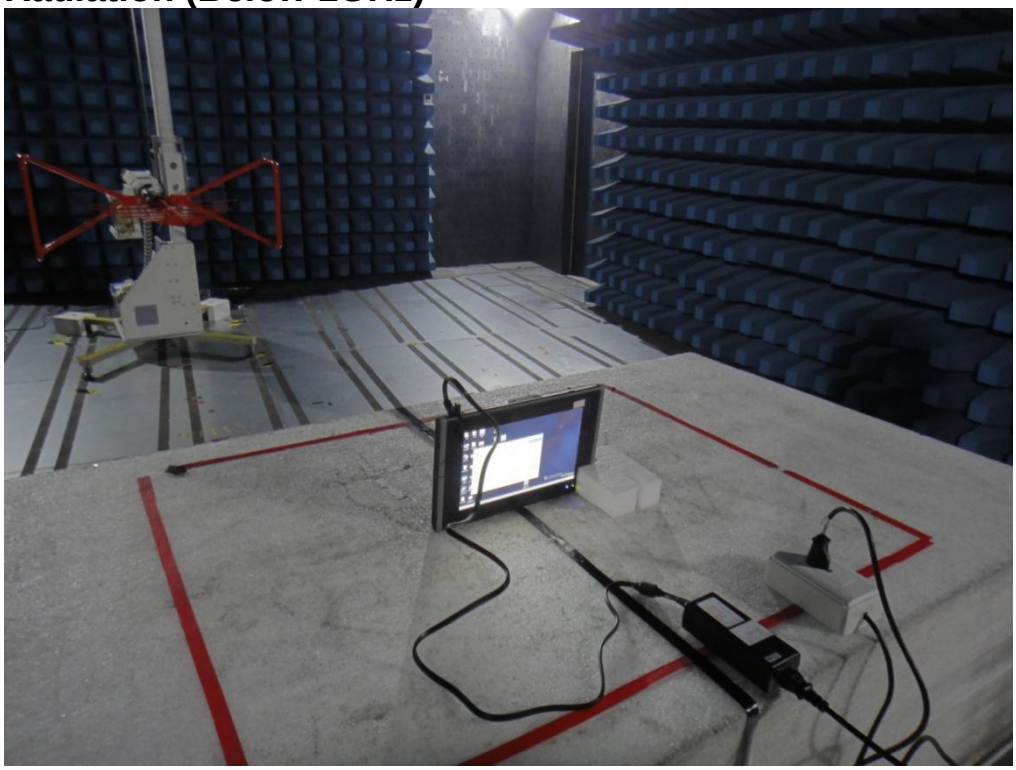
| Channel Move Time (ms) | Limit (s) |
|---|---|
| 200 | 10 |

| IEEE 802.11ac VHT 80 MHz at 5530 | |
|---|---|
| **Type 1_Channel closing transmisssion time** | **Type 1_Channel closing transmisssion time-caculate** |
|  |  |

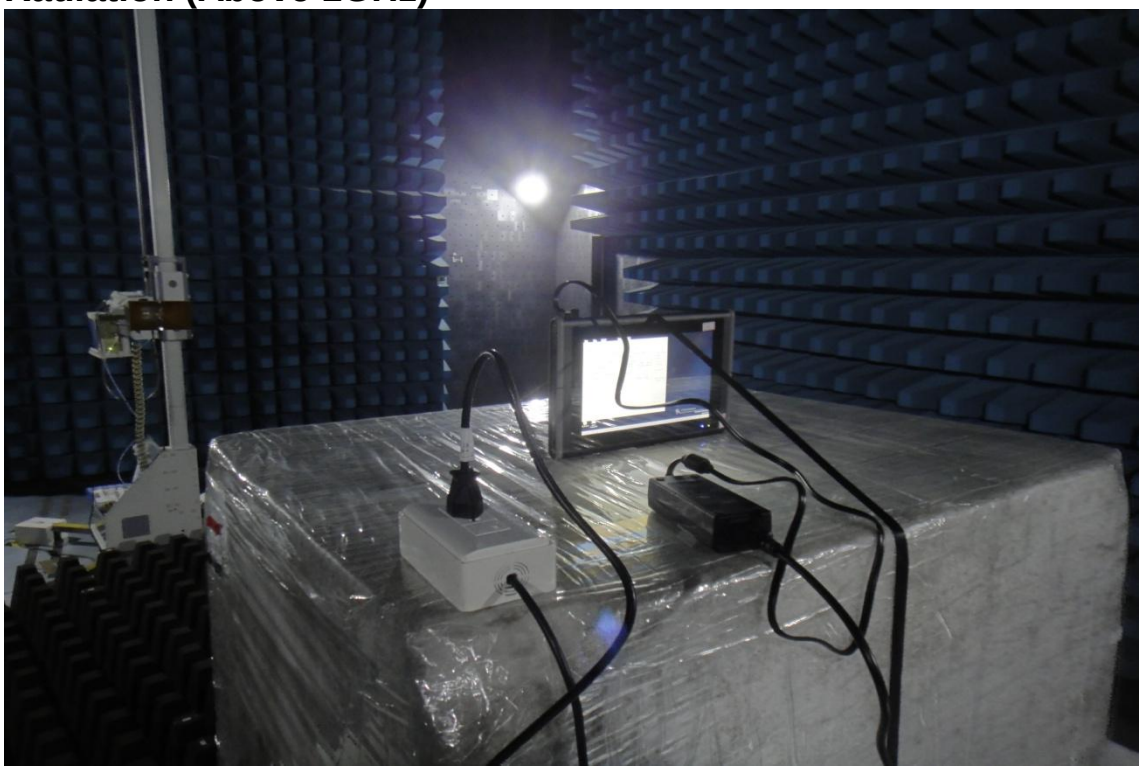
| Aggregate Transmission Time (ms) | Limit (ms) | Margin (ms) |
|---|---|---|
| 37.6 | 60 | -22.4 |

# APPENDIX-A Test Photo

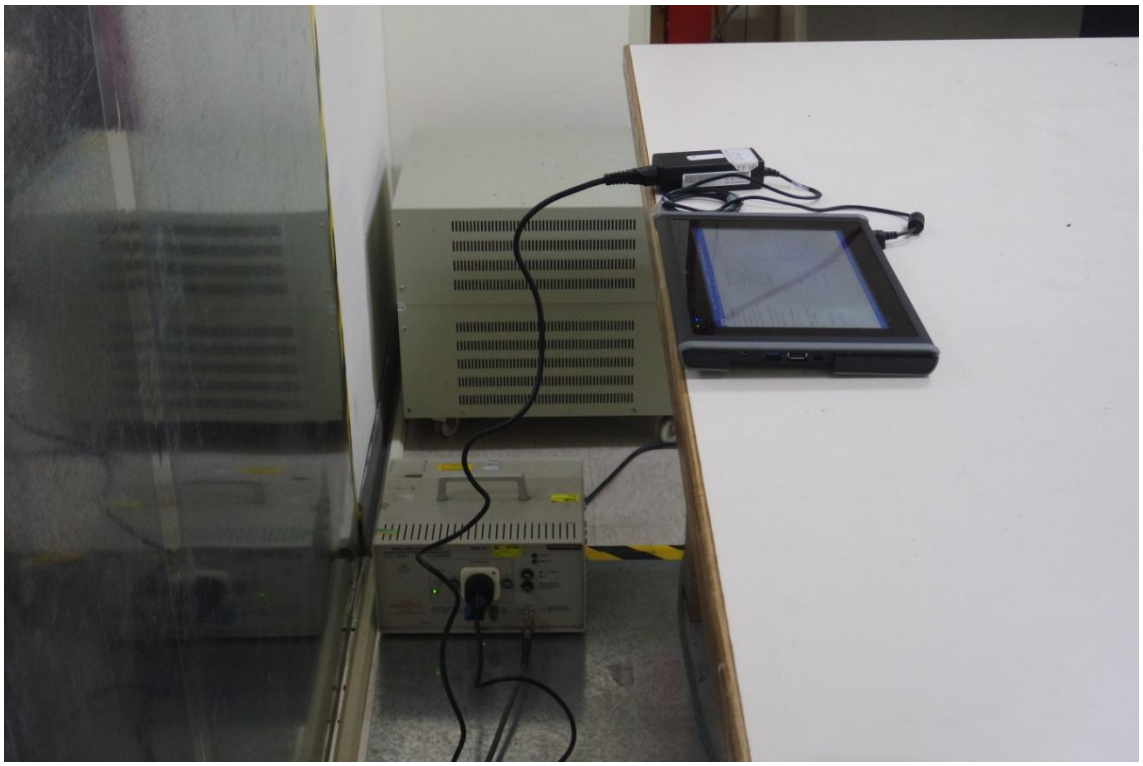
## Radiation (Below 1GHz)



## Radiation (Above 1GHz)



## Conduction



## DFS