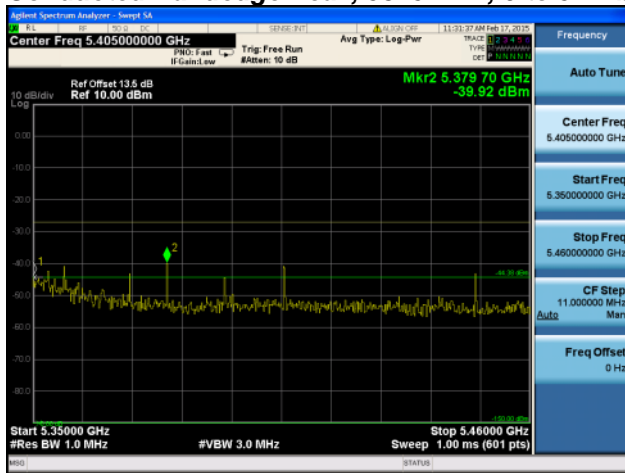
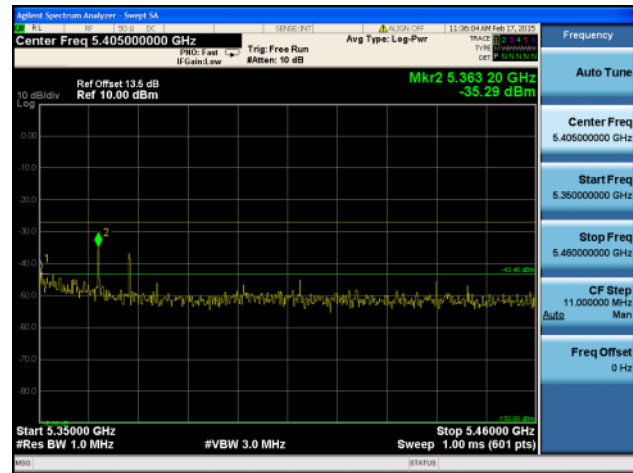




Conducted Bandedge Peak, 5320 MHz, 6 to 54 Mbps



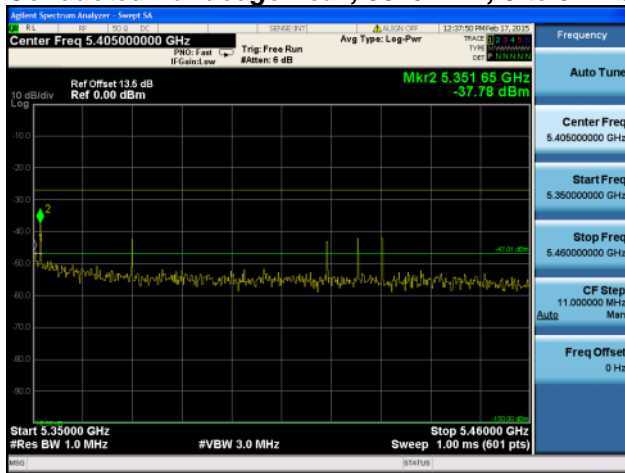
Antenna A



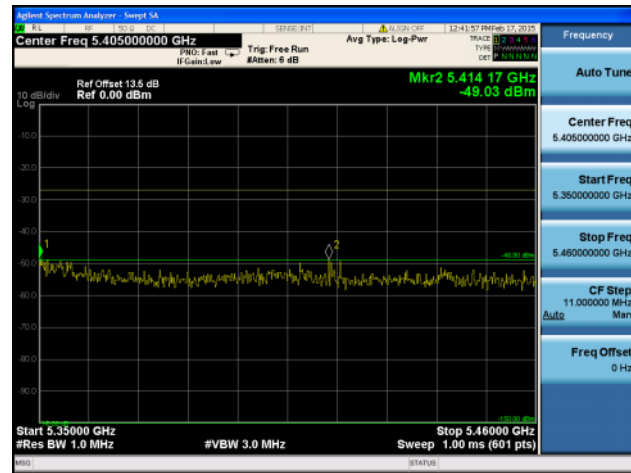
Antenna B



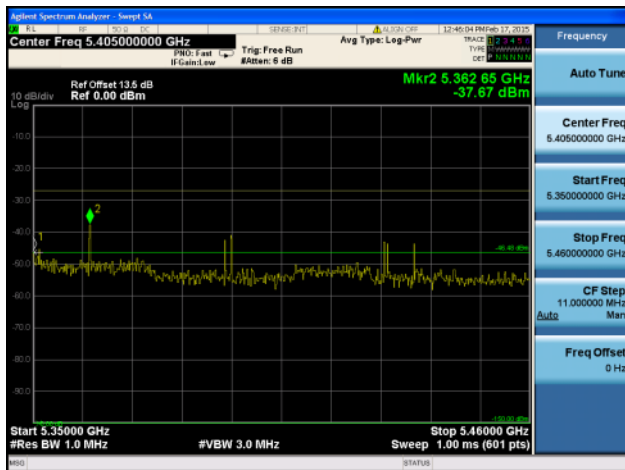
Conducted Bandedge Peak, 5320 MHz, 6 to 54 Mbps



Antenna A



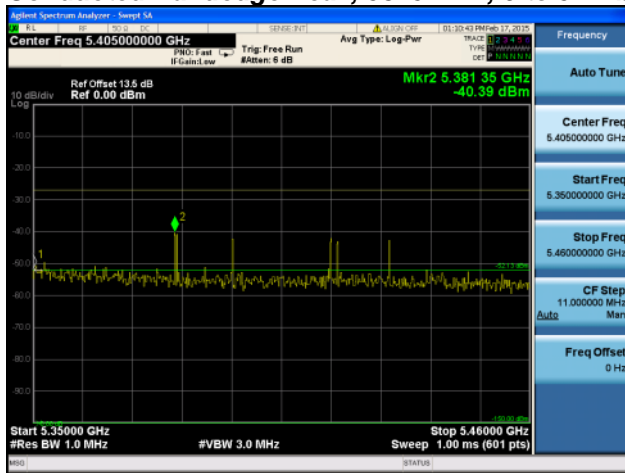
Antenna B



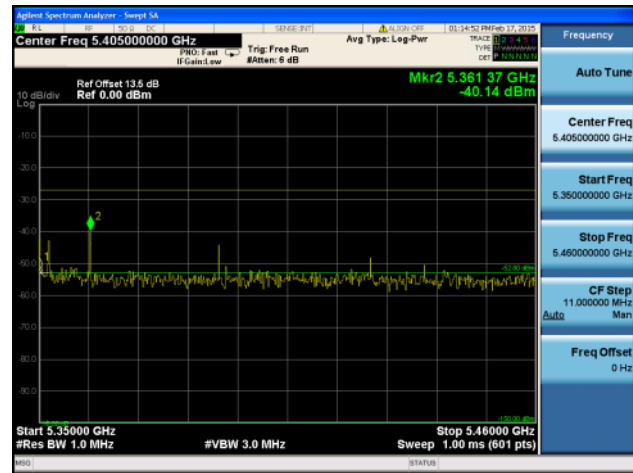
Antenna C



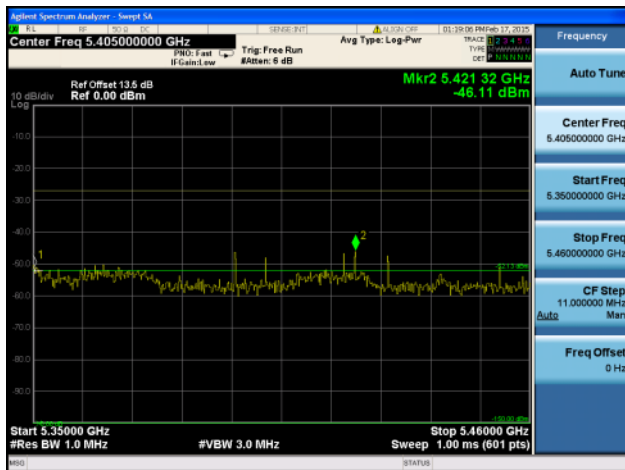
Conducted Bandedge Peak, 5320 MHz, 6 to 54 Mbps



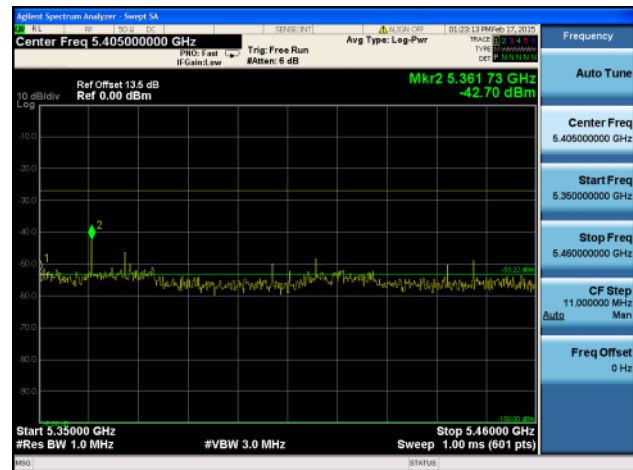
Antenna A



Antenna B



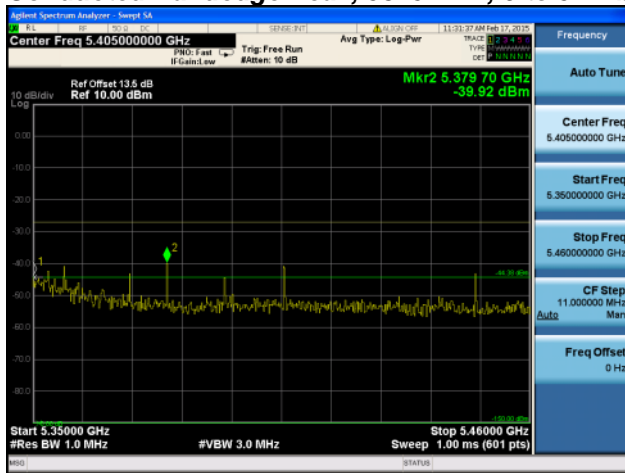
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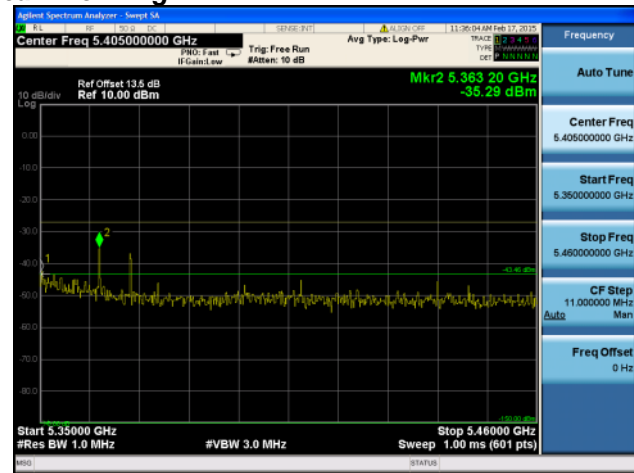
Antenna D



Conducted Bandedge Peak, 5320 MHz, 6 to 54 Mbps Beam Forming



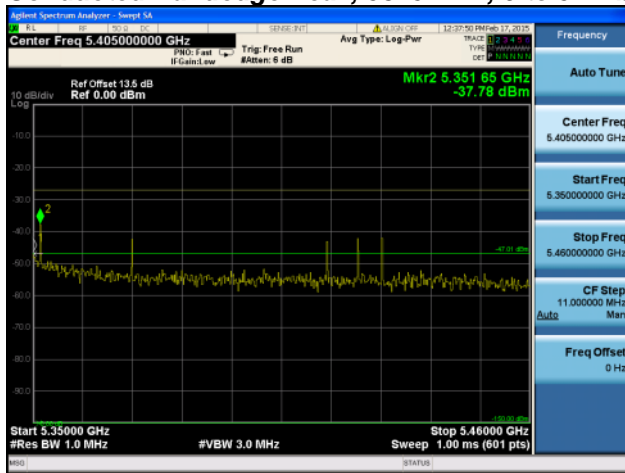
Antenna A



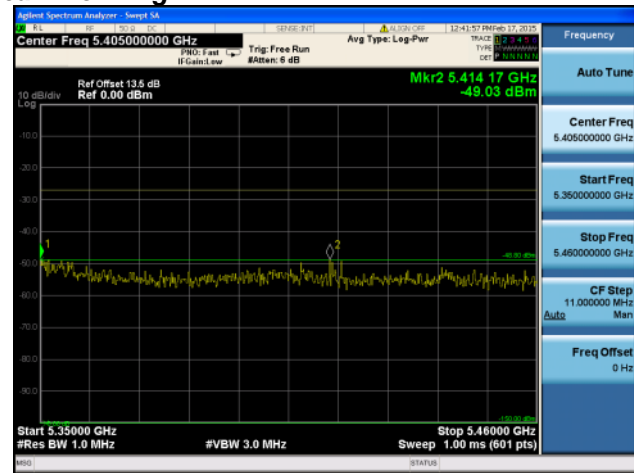
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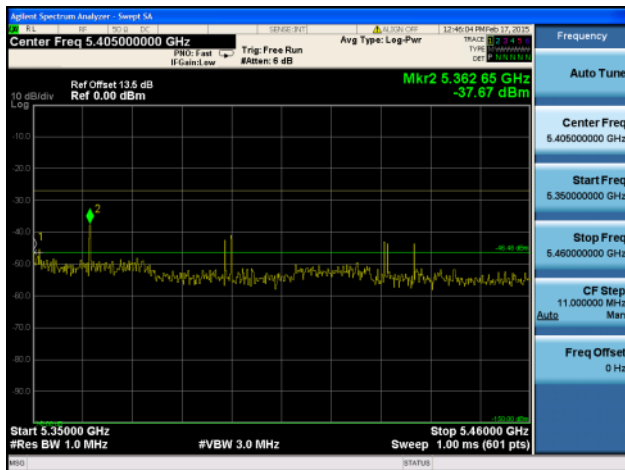
Conducted Bandedge Peak, 5320 MHz, 6 to 54 Mbps Beam Forming



Antenna A



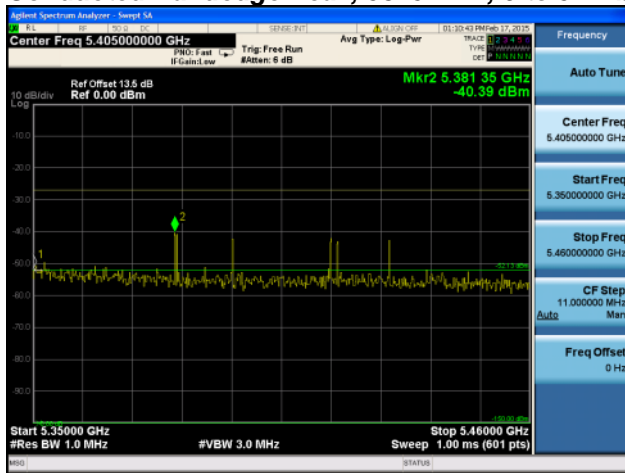
Antenna B



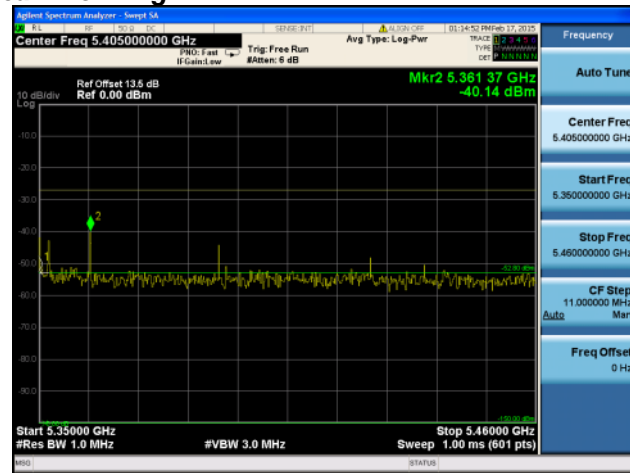
Antenna C



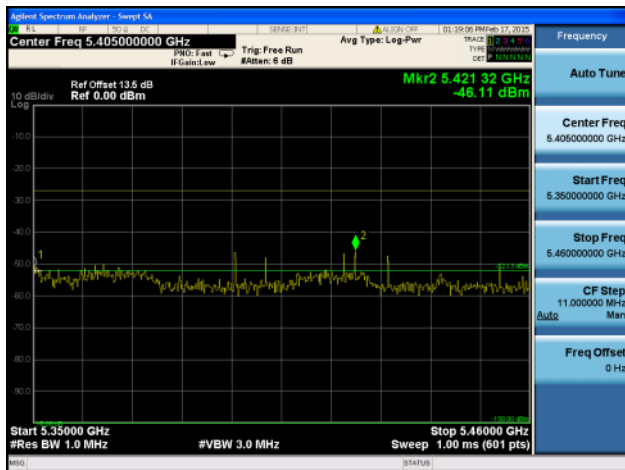
Conducted Bandedge Peak, 5320 MHz, 6 to 54 Mbps Beam Forming



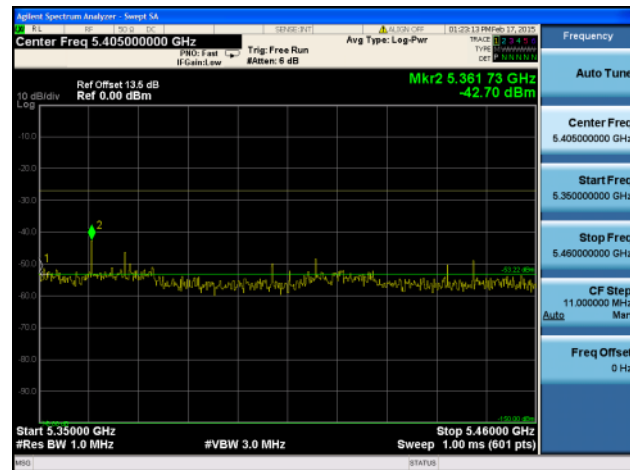
Antenna A



Antenna B



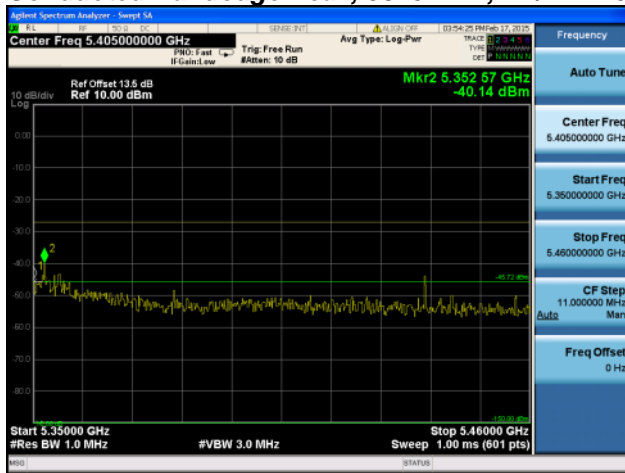
Antenna C



Antenna D



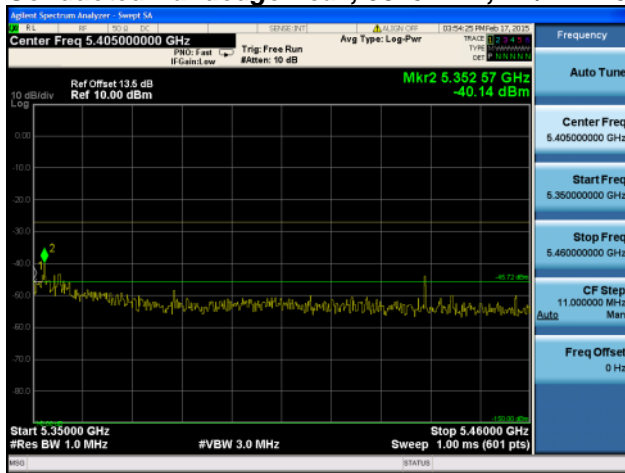
Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M0 to M7, M0 to M9 1ss



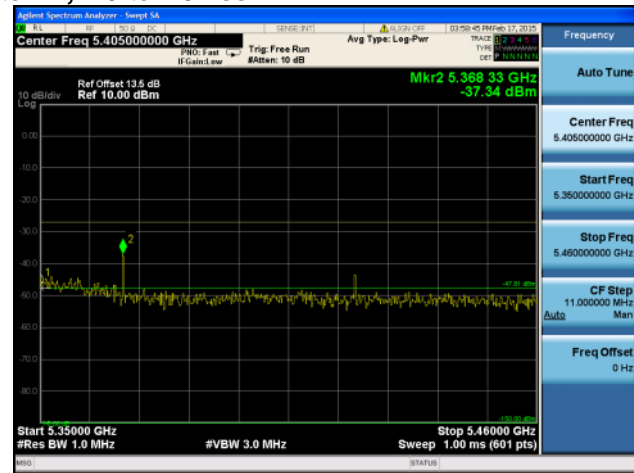
Antenna A



Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M0 to M7, M0 to M9 1ss



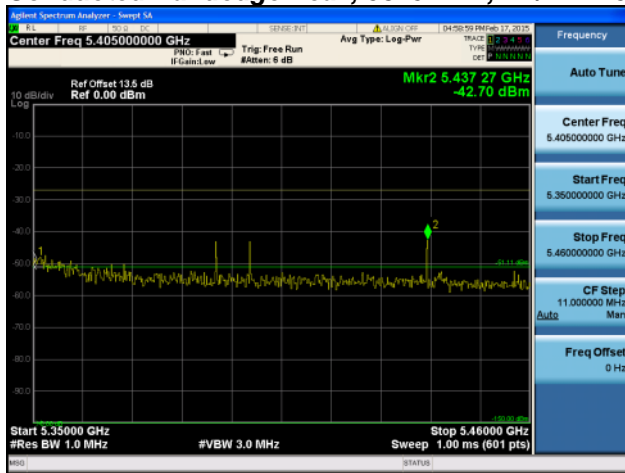
Antenna A



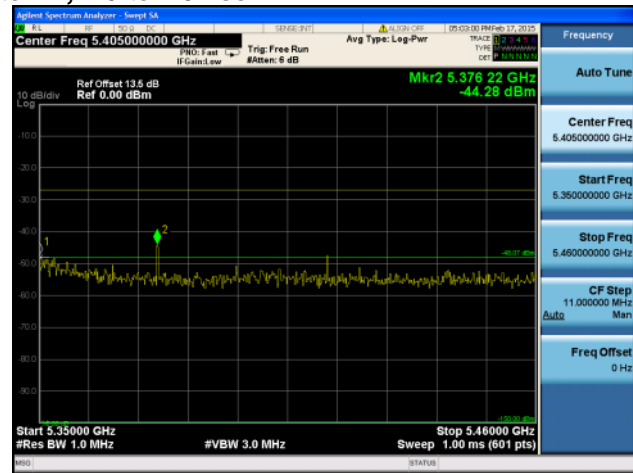
Antenna B



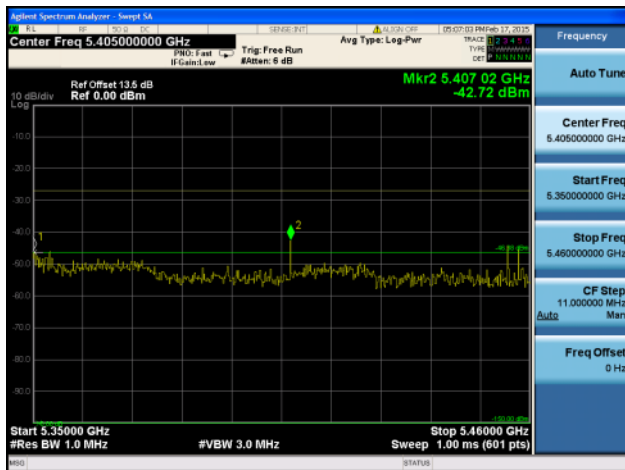
Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M0 to M7, M0 to M9 1ss



Antenna A



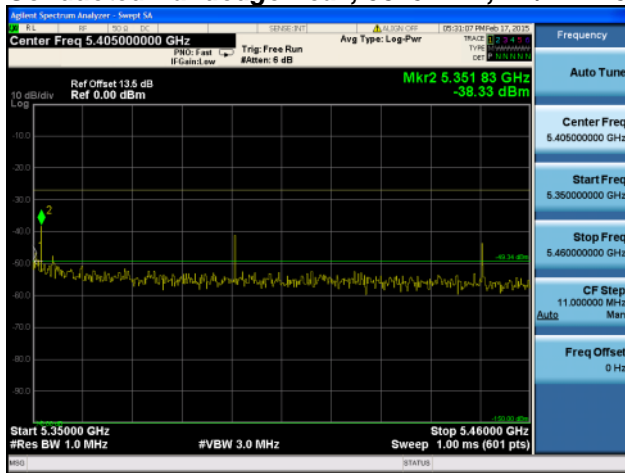
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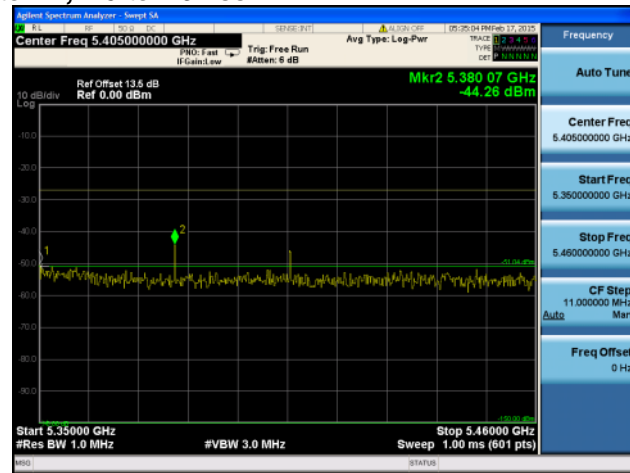
Antenna C



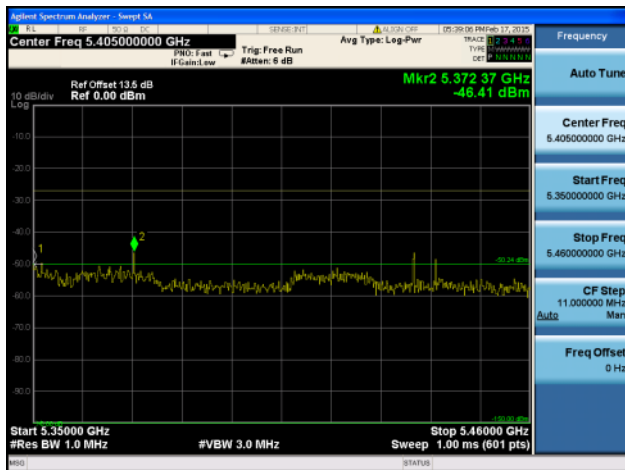
Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M0 to M7, M0 to M9 1ss



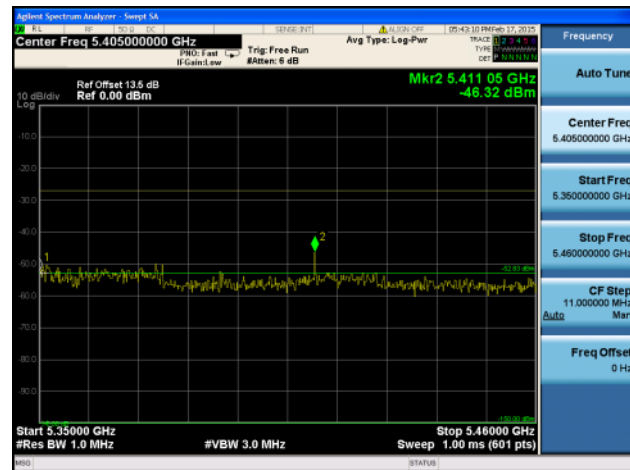
Antenna A



Antenna B



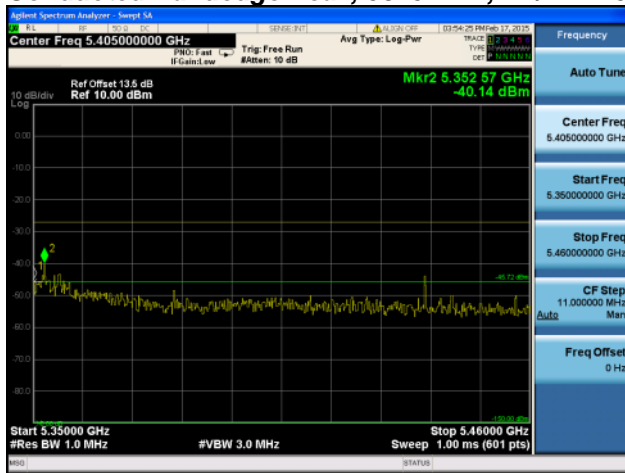
Antenna C



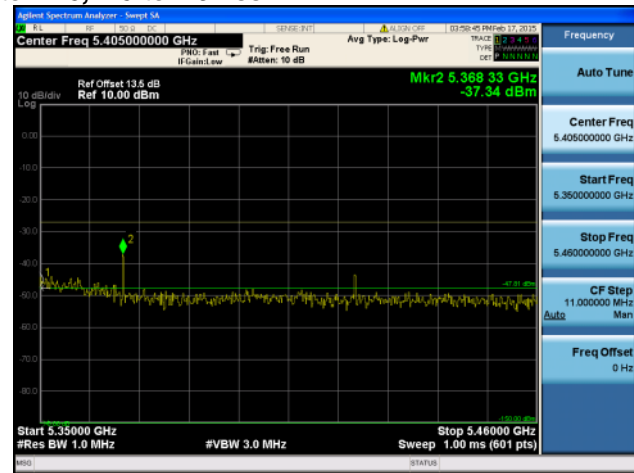
Antenna D



Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M8 to M15, M0 to M9 2ss



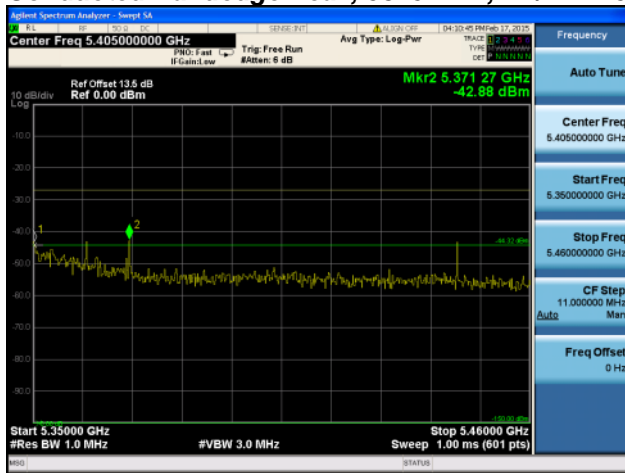
Antenna A



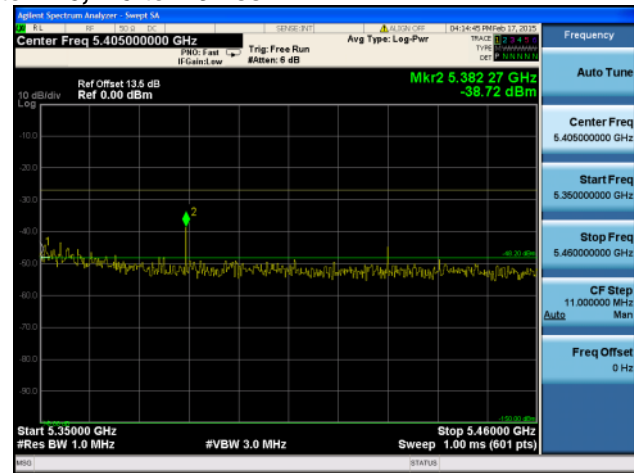
Antenna B



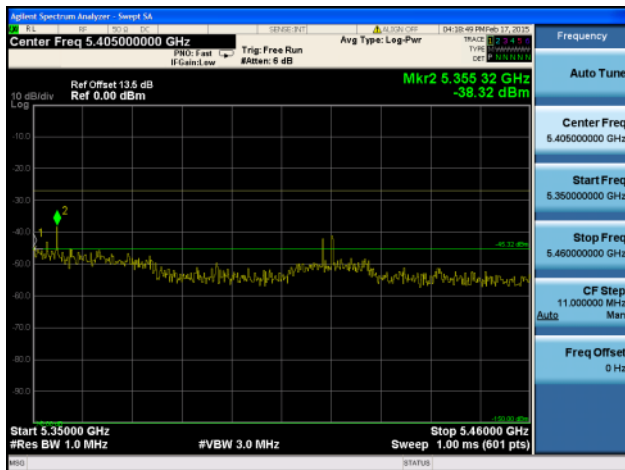
Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M8 to M15, M0 to M9 2ss



Antenna A



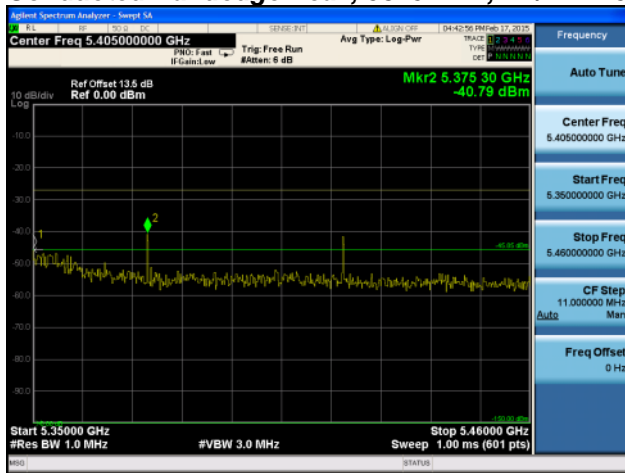
Antenna B



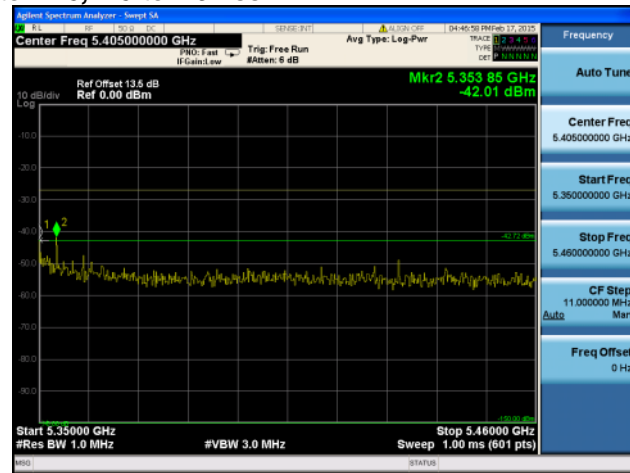
Antenna C



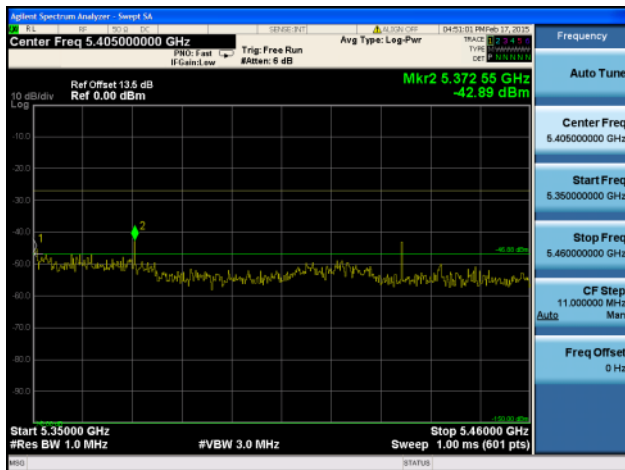
Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M8 to M15, M0 to M9 2ss



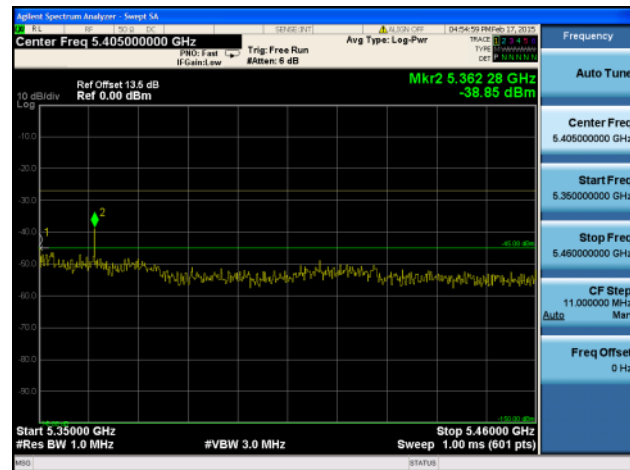
Antenna A



Antenna B



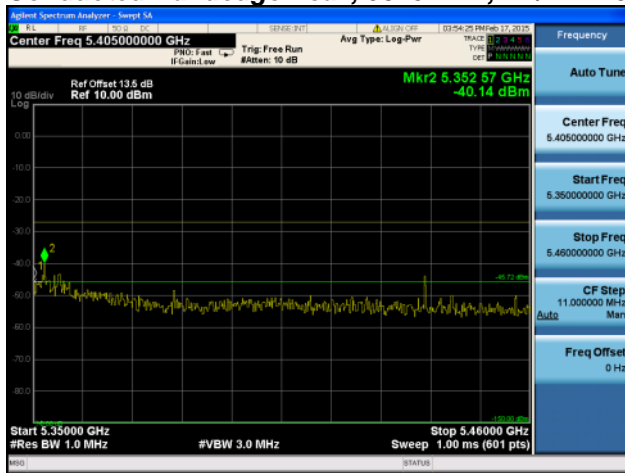
Antenna C



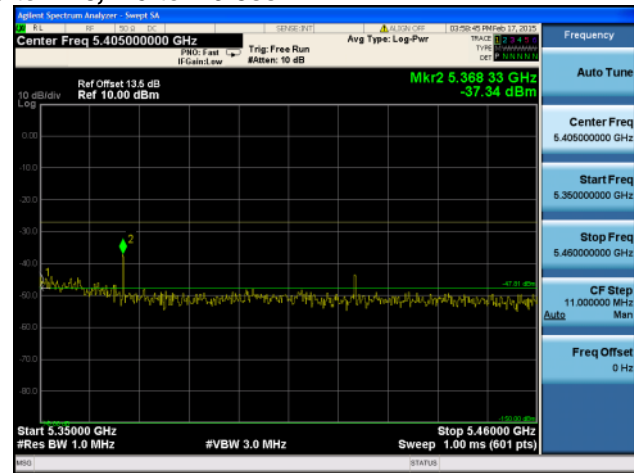
Antenna D



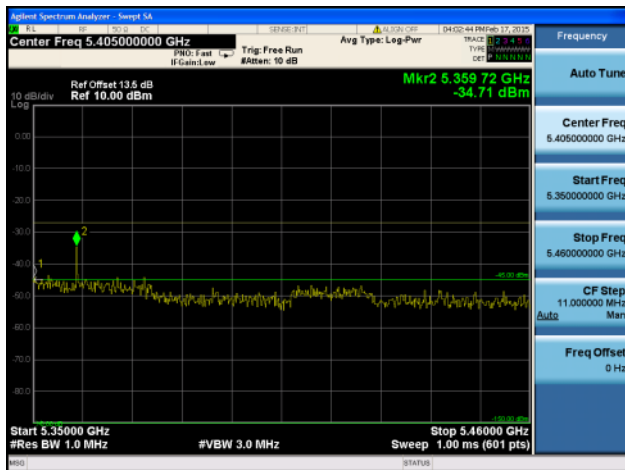
Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M16 to M23, M0 to M9 3ss



Antenna A



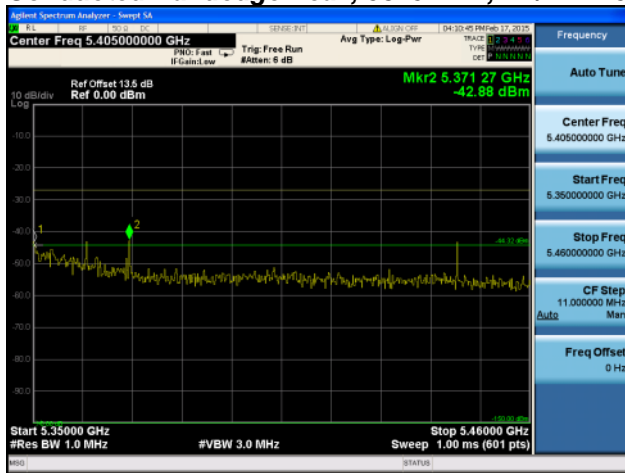
Antenna B



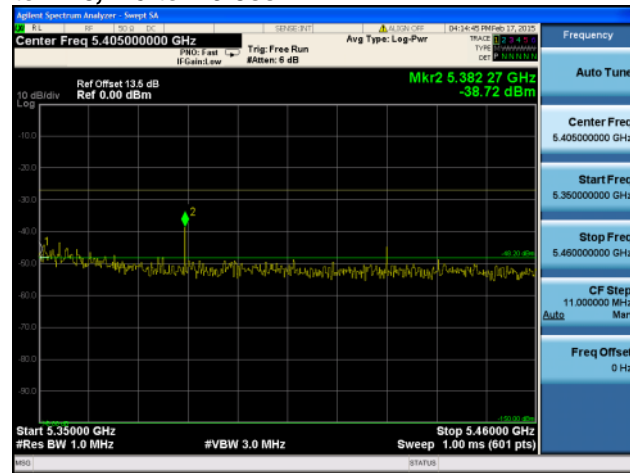
Antenna C



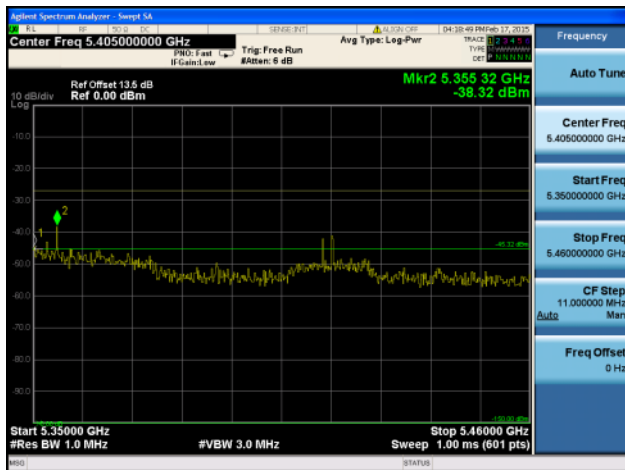
Conducted Bandedge Peak, 5320 MHz, HT/VHT20, M16 to M23, M0 to M9 3ss



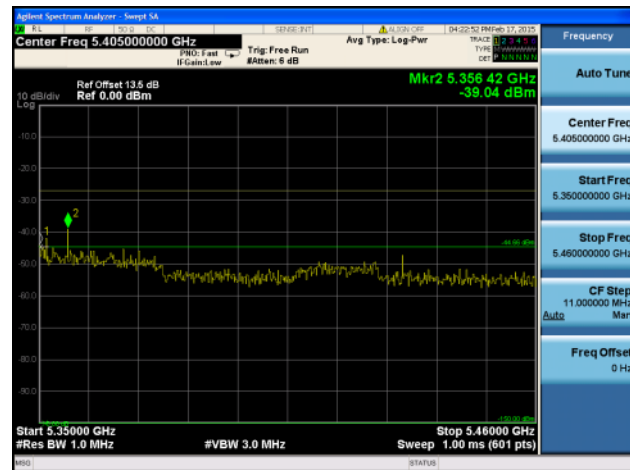
Antenna A



Antenna B



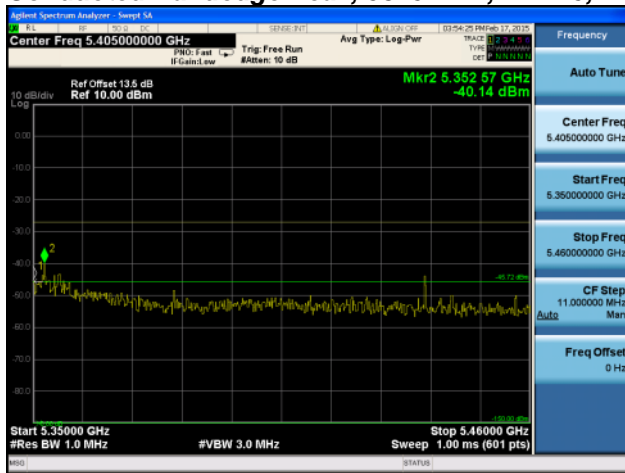
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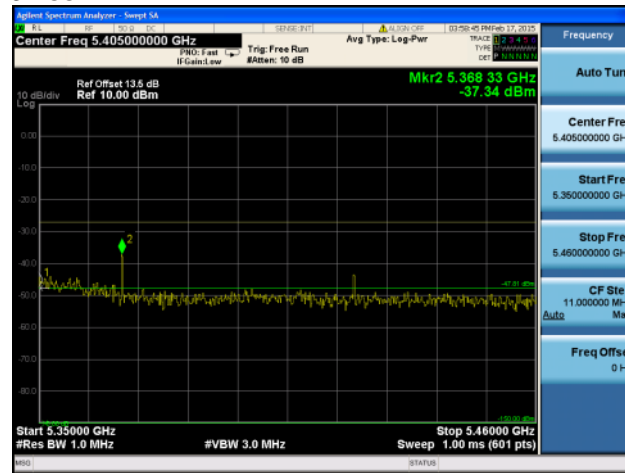
Antenna D



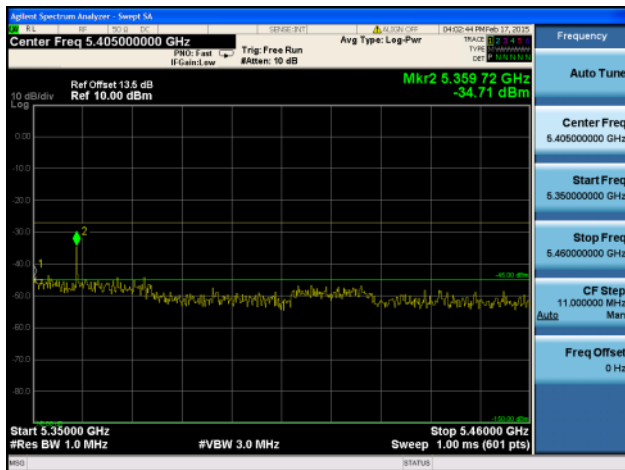
Conducted Bandedge Peak, 5320 MHz, VHT20, M0 to M9 4ss



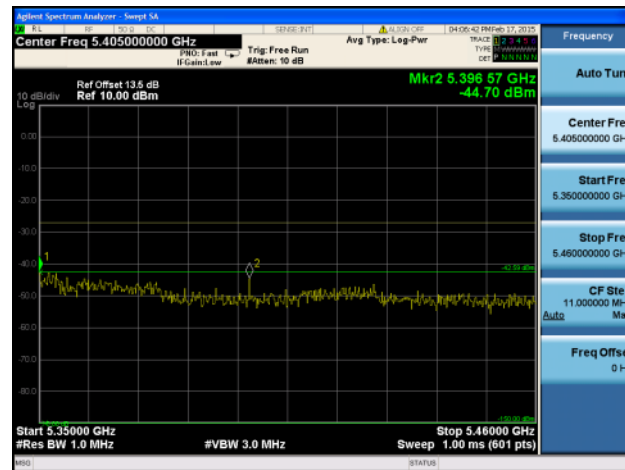
Antenna A



Antenna B



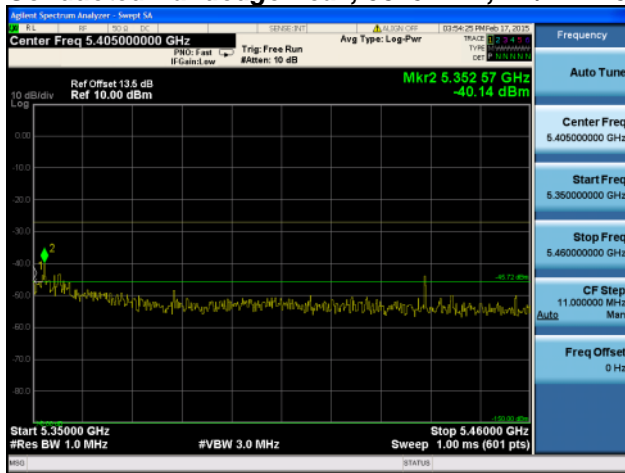
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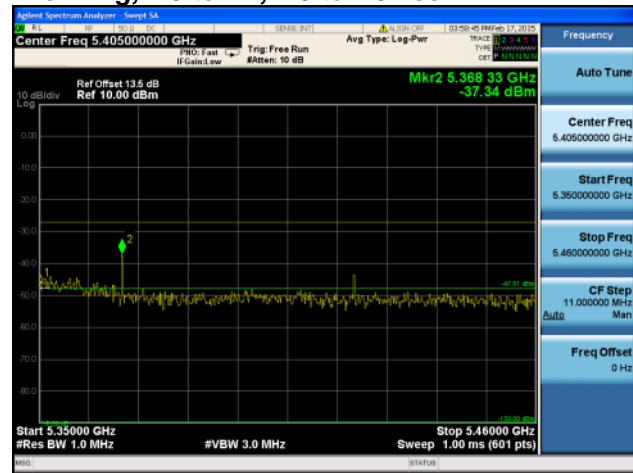
Antenna D



Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M0 to M7, M0 to M9 1ss



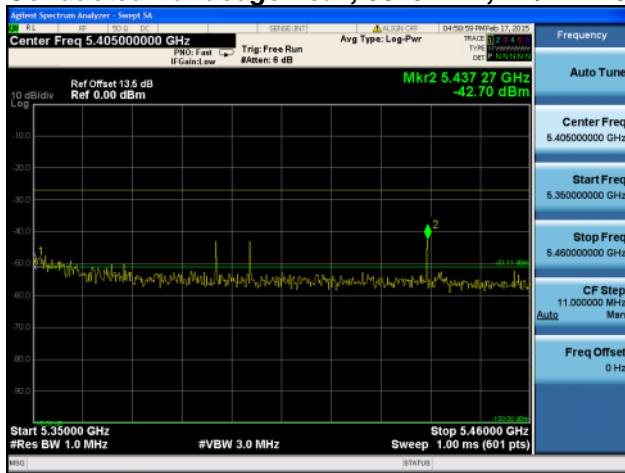
Antenna A



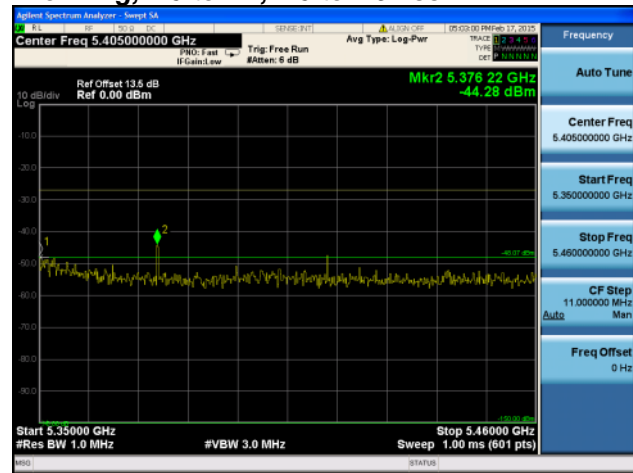
Antenna B



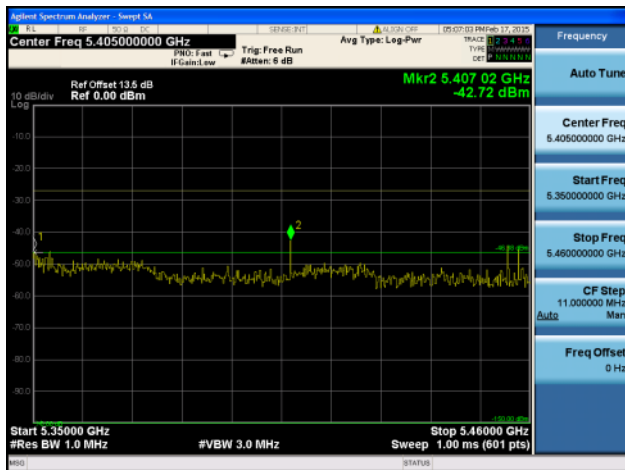
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M0 to M7, M0 to M9 1ss



Antenna A



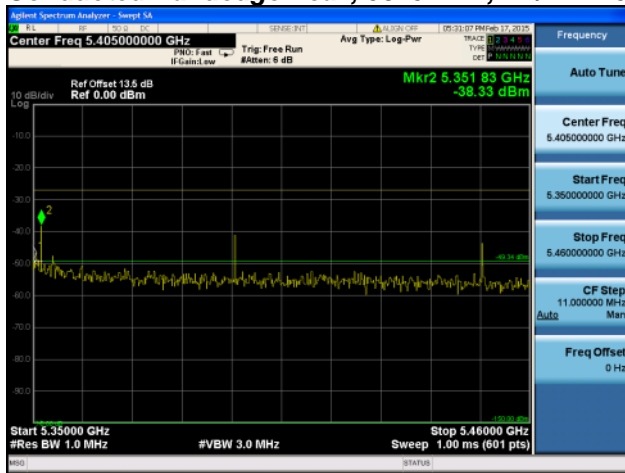
Antenna B



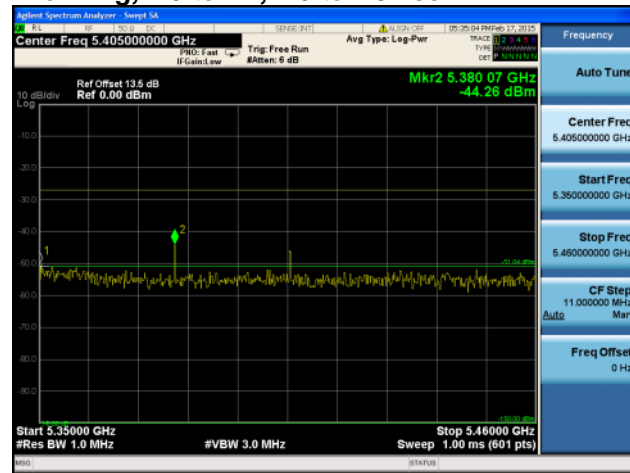
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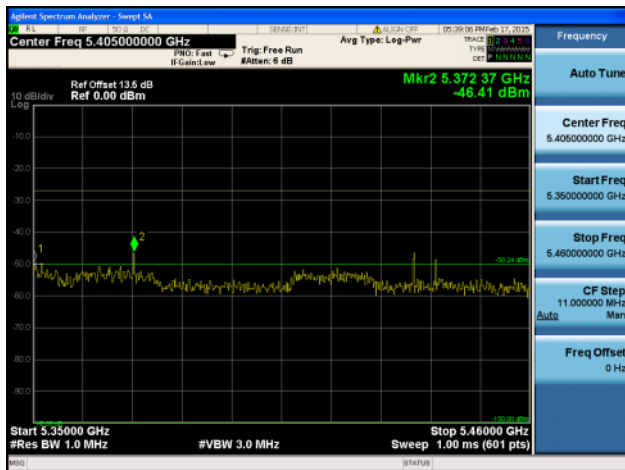
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M0 to M7, M0 to M9 1ss



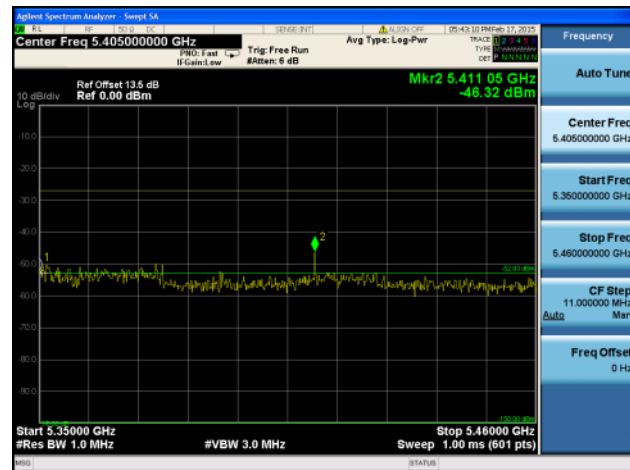
Antenna A



Antenna B



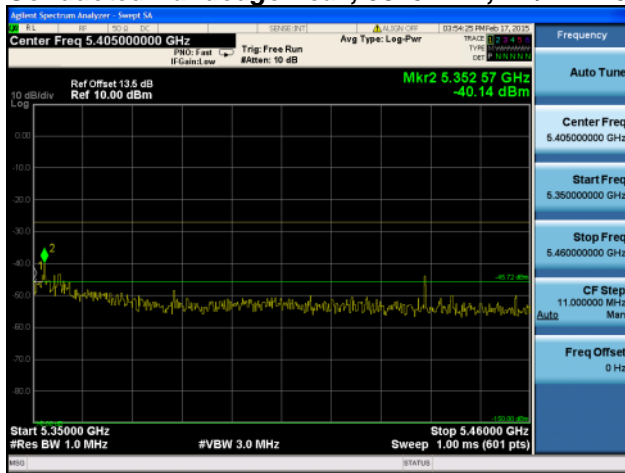
Antenna C



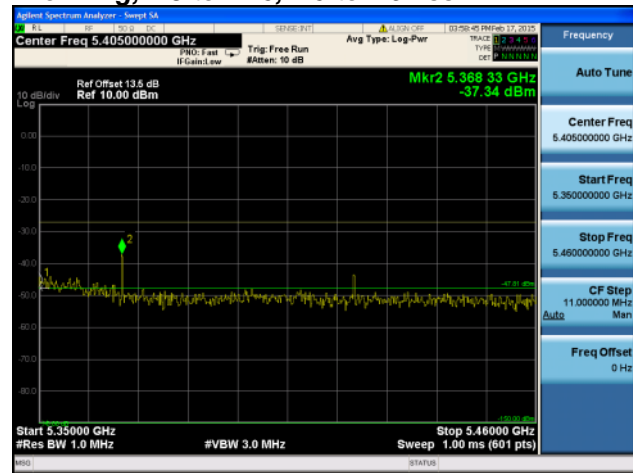
Antenna D



Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M8 to M15, M0 to M9 2ss



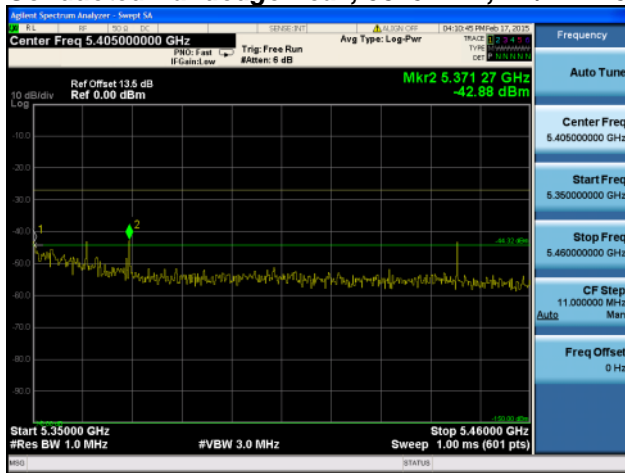
Antenna A



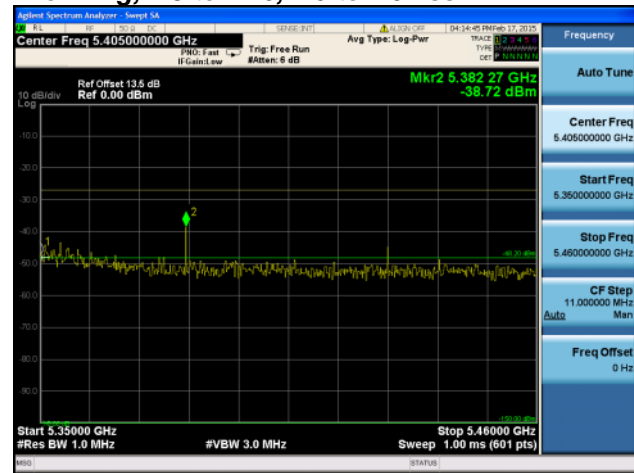
Antenna B



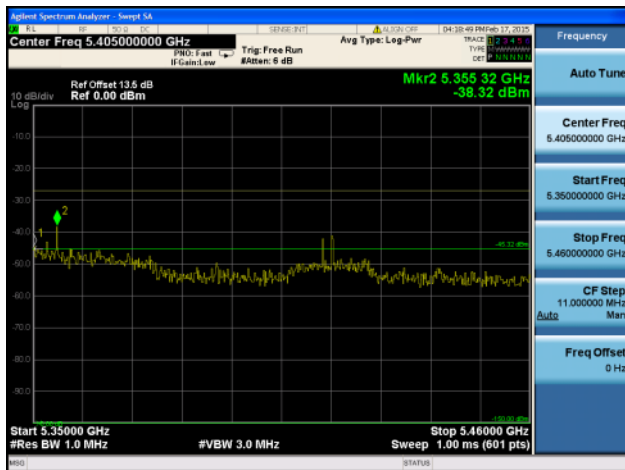
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M8 to M15, M0 to M9 2ss



Antenna A



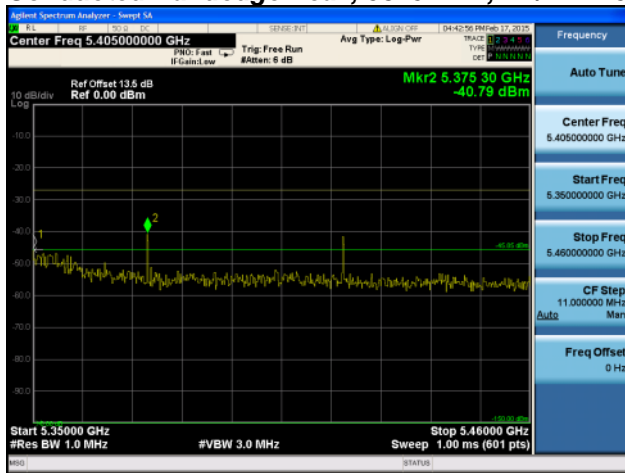
Antenna B



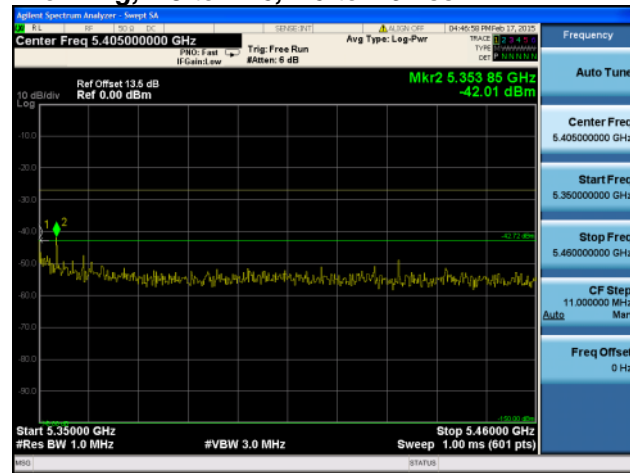
Antenna C



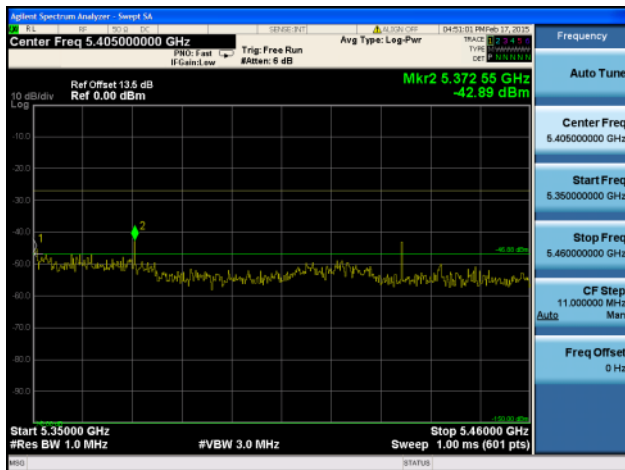
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M8 to M15, M0 to M9 2ss



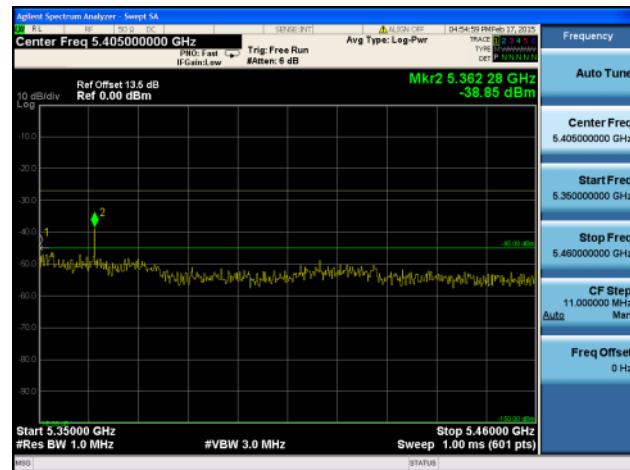
Antenna A



Antenna B



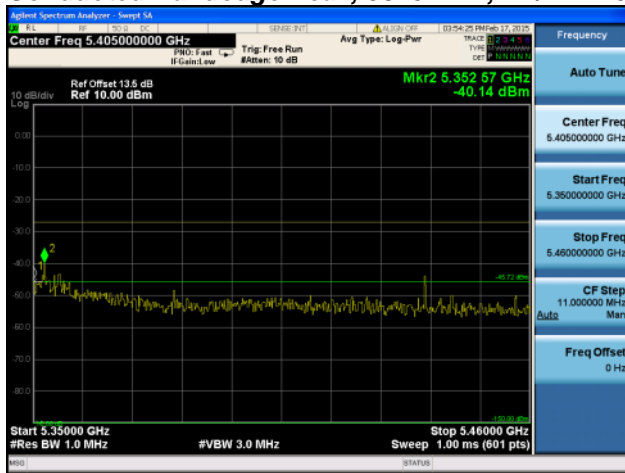
Antenna C



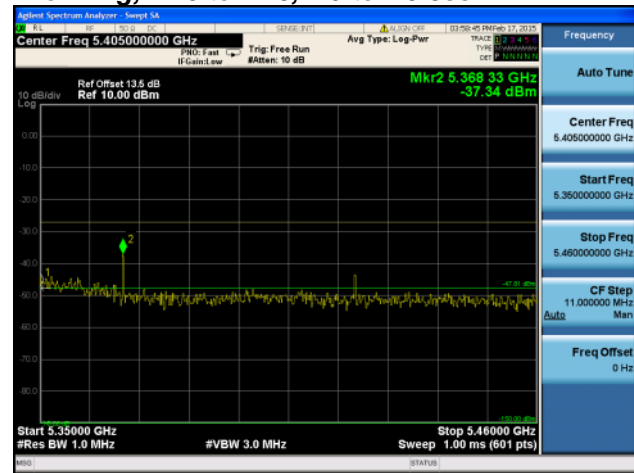
Antenna D



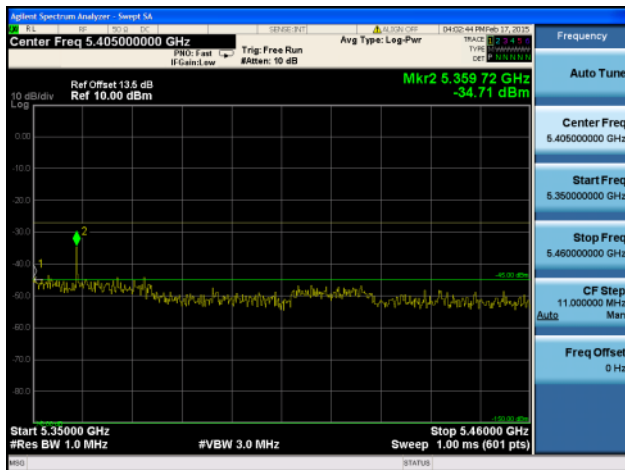
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M16 to M23, M0 to M9 3ss



Antenna A



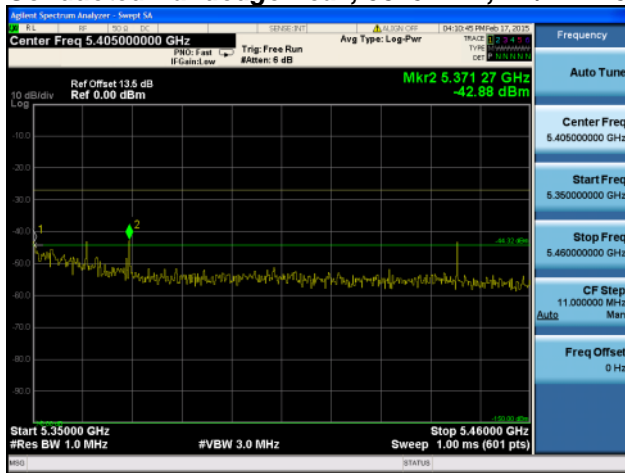
Antenna B



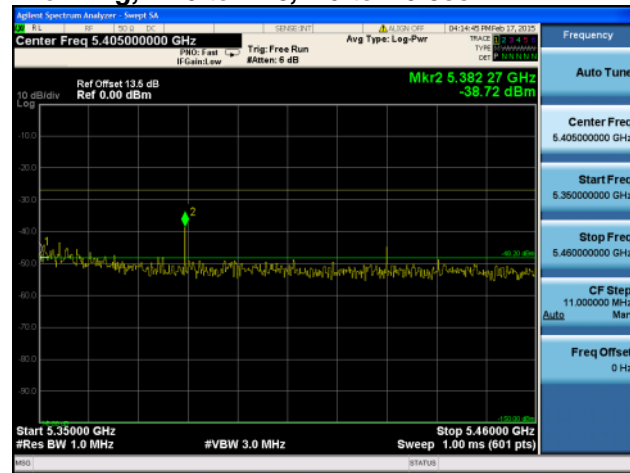
Antenna C



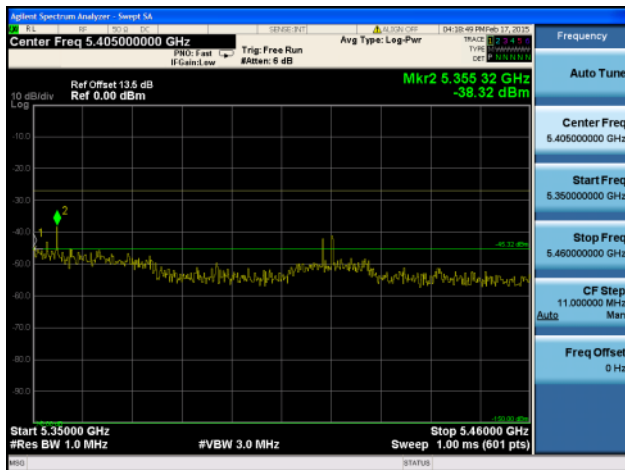
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 Beam Forming, M16 to M23, M0 to M9 3ss



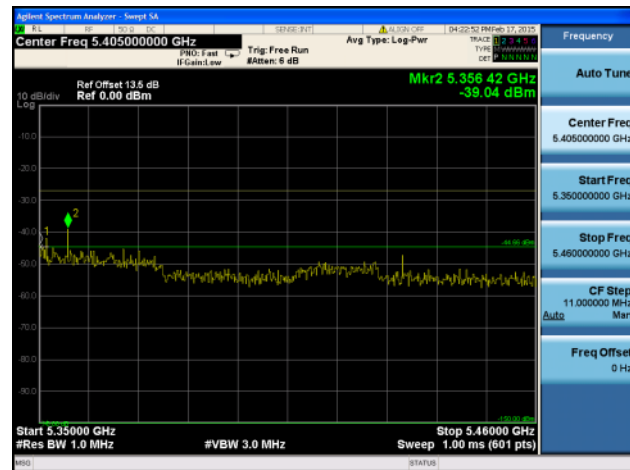
Antenna A



Antenna B



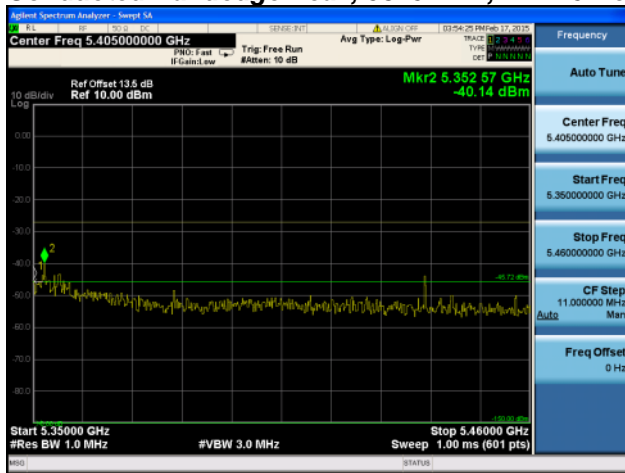
Antenna C



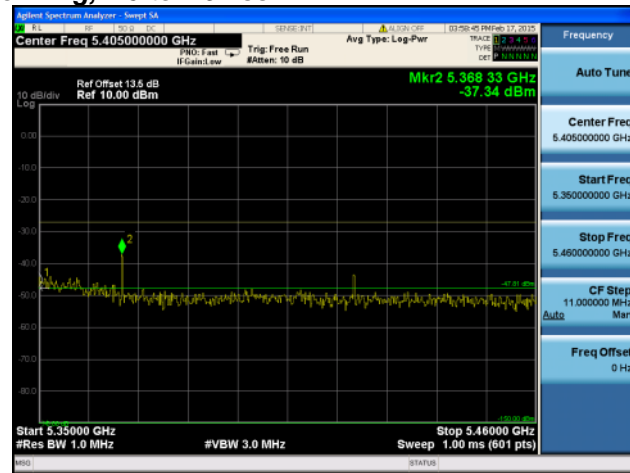
Antenna D



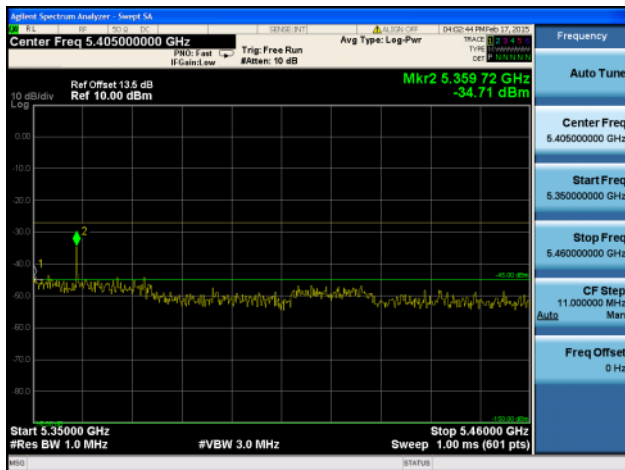
Conducted Bandedge Peak, 5320 MHz, VHT20 Beam Forming, M0 to M9 4ss



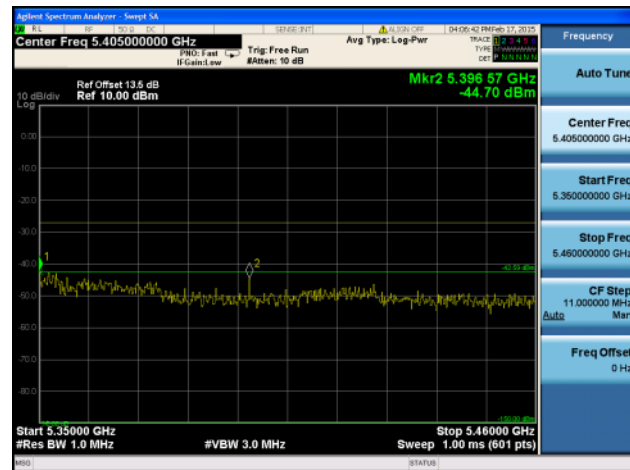
Antenna A



Antenna B



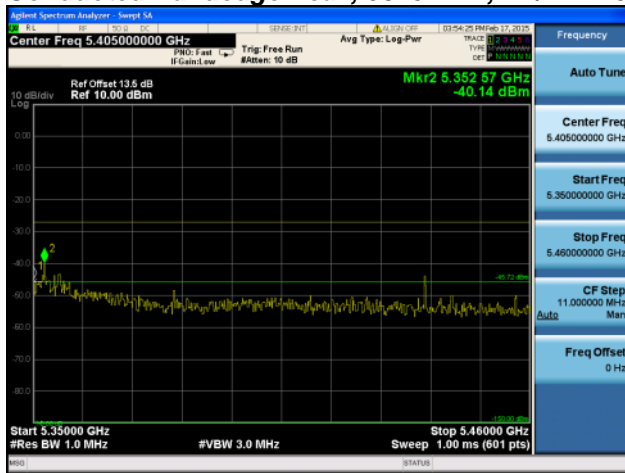
Antenna C



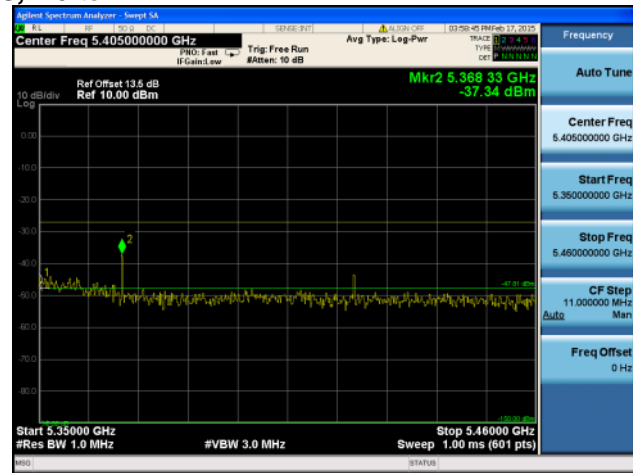
Antenna D



Conducted Bandedge Peak, 5320 MHz, HT/VHT20 STBC, M0 to M7



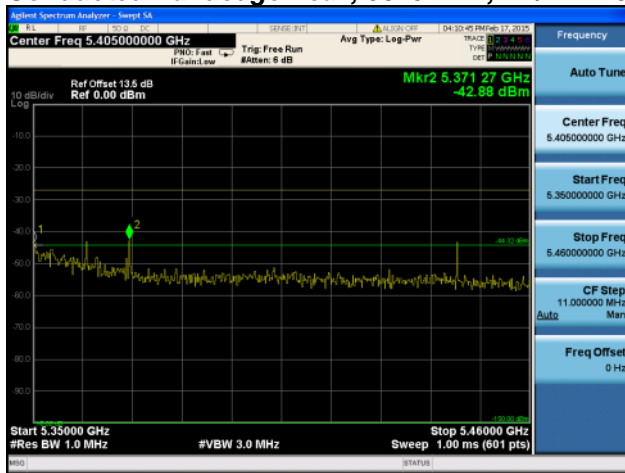
Antenna A



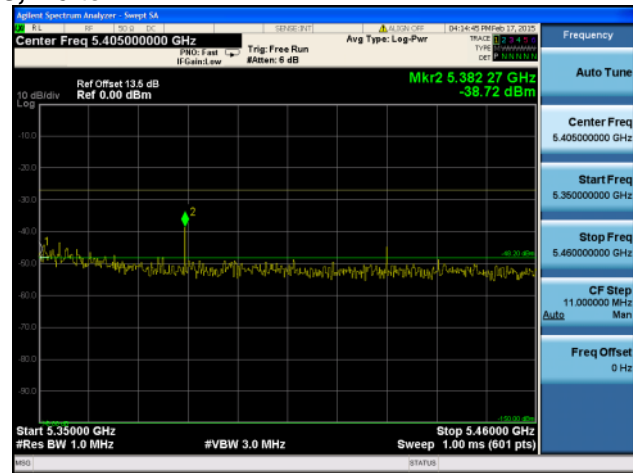
Antenna B



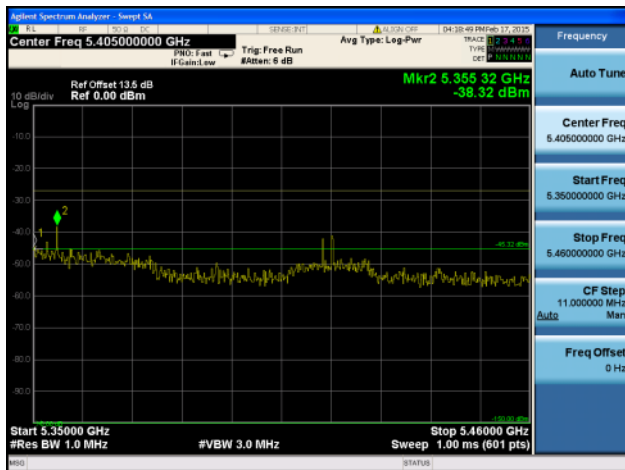
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 STBC, M0 to M7



Antenna A



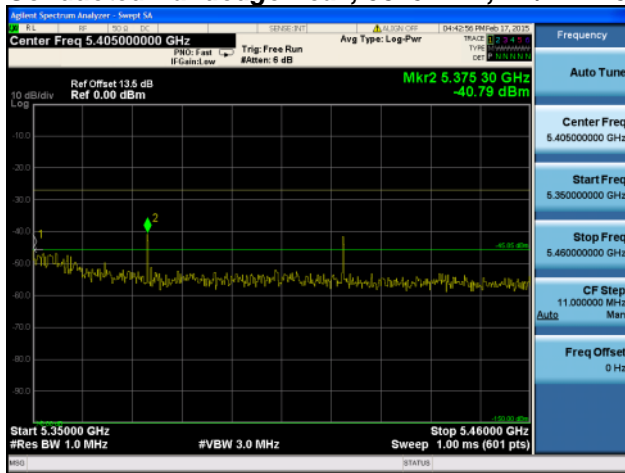
Antenna B



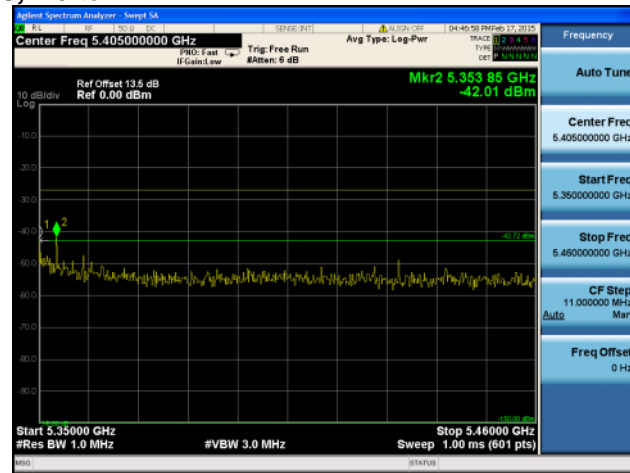
Antenna C



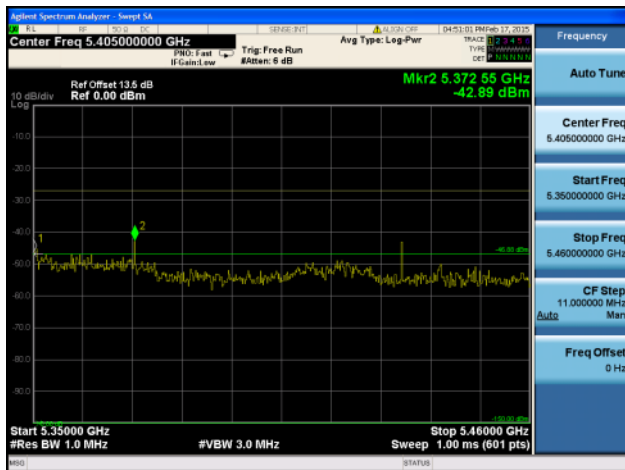
Conducted Bandedge Peak, 5320 MHz, HT/VHT20 STBC, M0 to M7



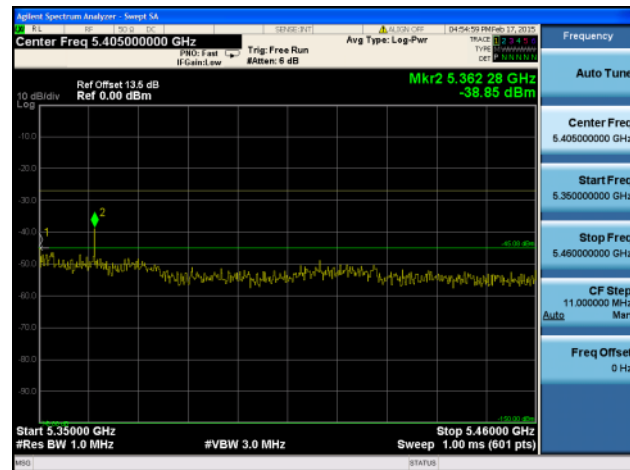
Antenna A



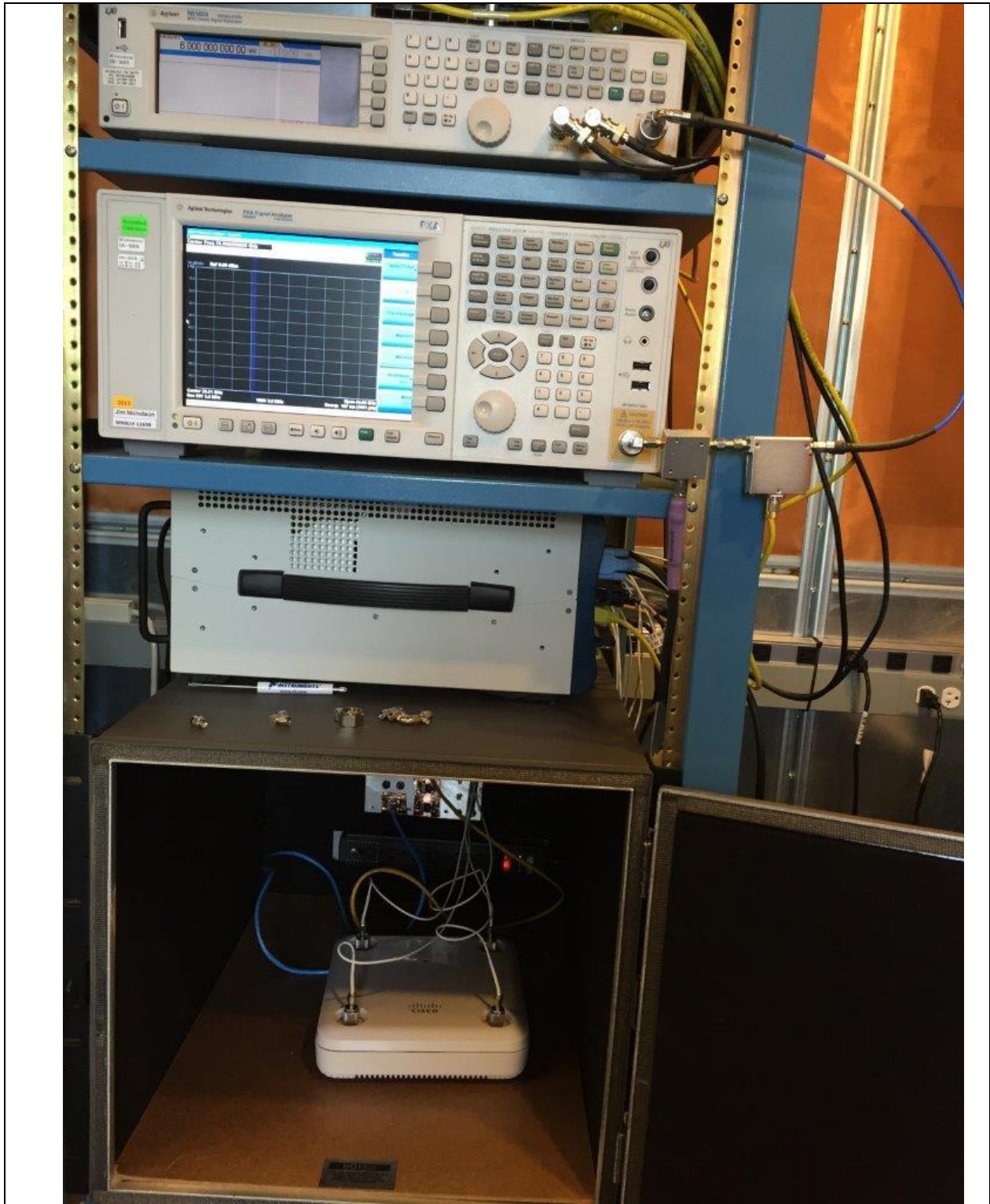
Antenna B



Antenna C



Antenna D



Title: Conducted Test Setup



Appendix B: Emission Test Results

Testing Laboratory: Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134, USA

Radiated Spurious Emissions

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

| | |
|-----------------------|--|
| Span: | 1GHz – 18 GHz/18GHz-26G/26GHz-40GHz/30M-1GHz |
| Reference Level: | 80 dBuV |
| Attenuation: | 10 dB |
| Sweep Time: | Coupled |
| Resolution Bandwidth: | 1MHz |
| Video Bandwidth: | 1 MHz for peak, 10 kHz for average |
| Detector: | Peak |

Maximize Turntable (find worst case table angle), Maximize Antenna (find worst case height)

Save 2 plots: 1) Average Plot (Vertical and Horizontal), Limit= 54dBuV @3m
 2) Peak plot (Vertical and Horizontal), Limit = 74dBuV @3m

Place a marker at the end of the restricted band closest to the transmit frequency to show compliance.
Also measure any emissions in the restricted bands.

This report represents the worst case data for all supported operating modes and antennas.
Antenna ports are terminated in 50 ohm loads



Transmitter Radiated Spurious Emissions-Average

| Frequency (MHz) | Mode | Data Rate (Mbps) | Spurious Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------------------------|------------------|----------------------------------|----------------|-------------|
| 5260 | 6 to 54 Mbps | 6 | 51.9 | 54 | 2.1 |
| | HT/VHT40, M0 to M23, M0.0 to M9.4 | m0 | 51.7 | 54 | 2.3 |
| | VHT80, M0 to M9, M0 to M9 1-1ss | m0 | 51.9 | 54 | 2.1 |
| | | | | | |
| 5280 | 6 to 54 Mbps | 6 | 51.7 | 54 | 2.3 |
| | | | | | |
| 5320 | 6 to 54 Mbps | 6 | 51.8 | 54 | 2.2 |
| | HT/VHT40, M0 to M23, M0.0 to M9.4 | m0 | 51.5 | 54 | 2.5 |



Transmitter Radiated Spurious Emissions (1GHz-18GHz)

Radiated Transmitter Spurs, 5260 MHz, 6 to 54 Mbps, Average



Radiated Transmitter Spurs, 5260 MHz, HT/VHT40, M0 to M23, M0.0 to M9.4, Average





Radiated Transmitter Spurs, 5260 MHz , VHT80, M0 to M9, M0 to M9 1.1, Average



Radiated Transmitter Spurs, 5280 MHz, 6 to 54 Mbps, Average

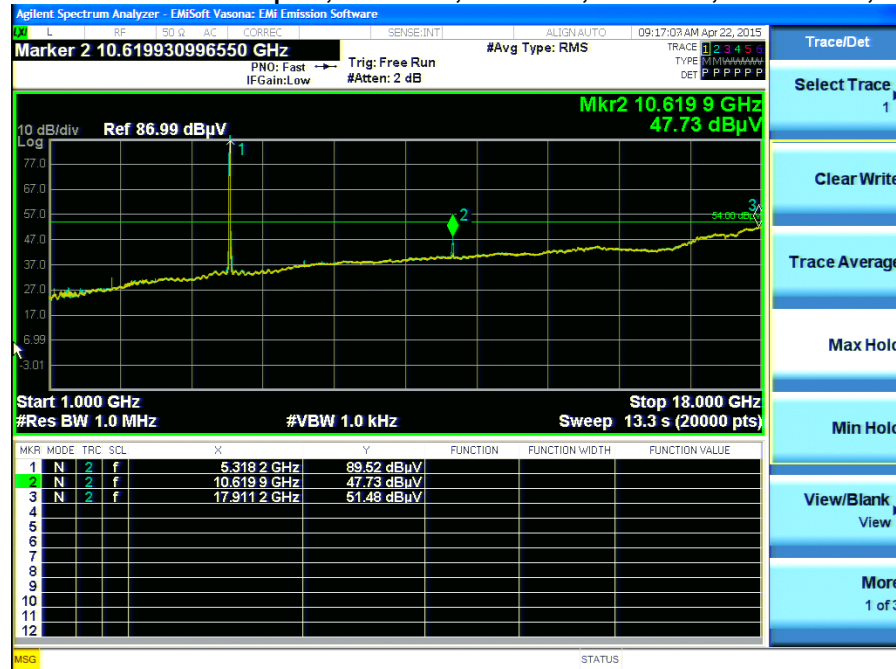




Radiated Transmitter Spurs, 5320 MHz, 6 to 54 Mbps, Average



Radiated Transmitter Spurs, 5320 MHz, HT/VHT40, M0 to M23, M0.0 to M9.4, Average





Transmitter Radiated Spurious Emissions-Peak

| Frequency (MHz) | Mode | Data Rate (Mbps) | Spurious Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------------------------|------------------|----------------------------------|----------------|-------------|
| 5260 | 6 to 54 Mbps | 6 | 62.1 | 74 | 11.9 |
| | HT/VHT40, M0 to M23, M0.0 to M9.4 | m0 | 62.3 | 74 | 11.7 |
| | VHT80, M0 to M9, M0 to M9 1-1ss | m0 | 63.7 | 74 | 10.3 |
| | | | | | |
| 5280 | 6 to 54 Mbps | 6 | 62.8 | 74 | 11.2 |
| | | | | | |
| 5320 | 6 to 54 Mbps | 6 | 63.1 | 74 | 10.9 |
| | HT/VHT40, M0 to M23, M0.0 to M9.4 | m0 | 63.4 | 74 | 10.6 |



Radiated Transmitter Spurs, 5260 MHz, 6 to 54 Mbps, Peak

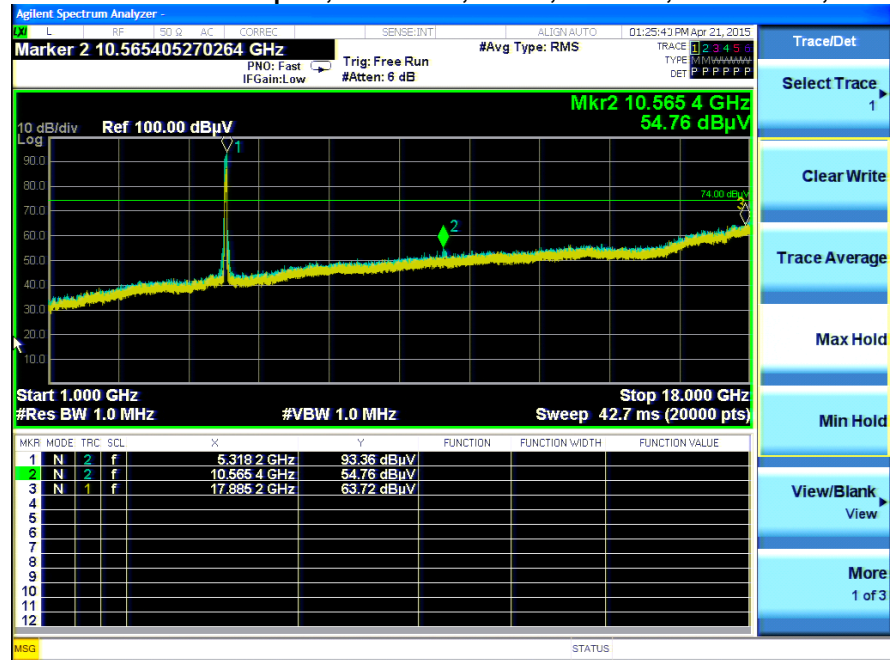


Radiated Transmitter Spurs, 5260 MHz, HT/VHT40, M0 to M23, M0.0 to M9.4, Peak





Radiated Transmitter Spurs, 5260 MHz, VHT80, M0 to M9, M0 to M9 1.1, Peak

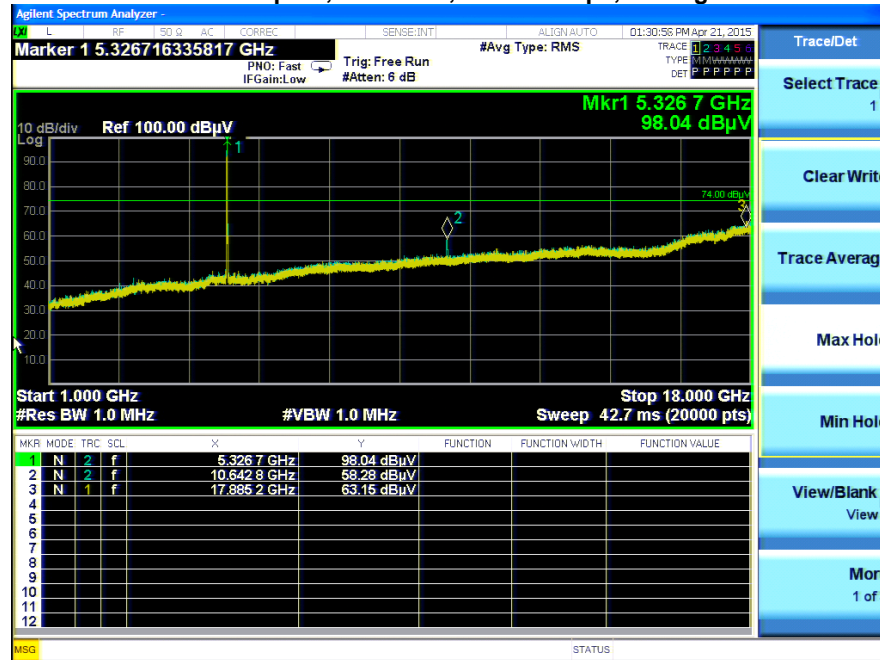


Radiated Transmitter Spurs, 5280 MHz, 6 to 54 Mbps, Peak





Radiated Transmitter Spurs, 5320 MHz, 6 to 54 Mbps, Average



Radiated Transmitter Spurs, 5320 MHz, HT/VHT40, M0 to M23, M0.0 to M9.4, Peak

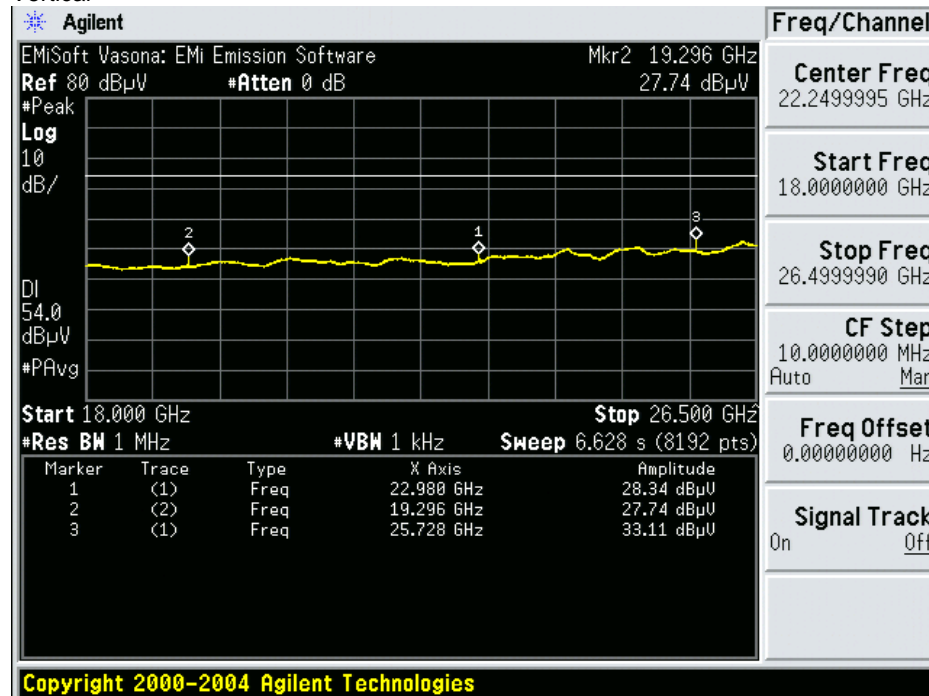




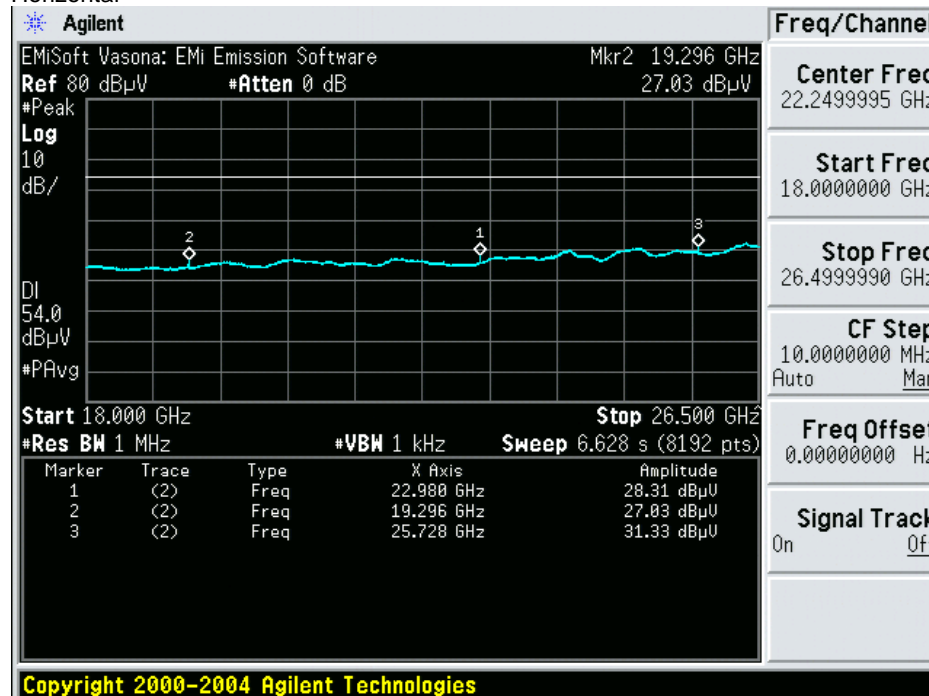
Transmitter Radiated Spurious Emissions (18GHz-26GHz)

Radiated Transmitter Spurs, All rate, All modes, Average

Vertical



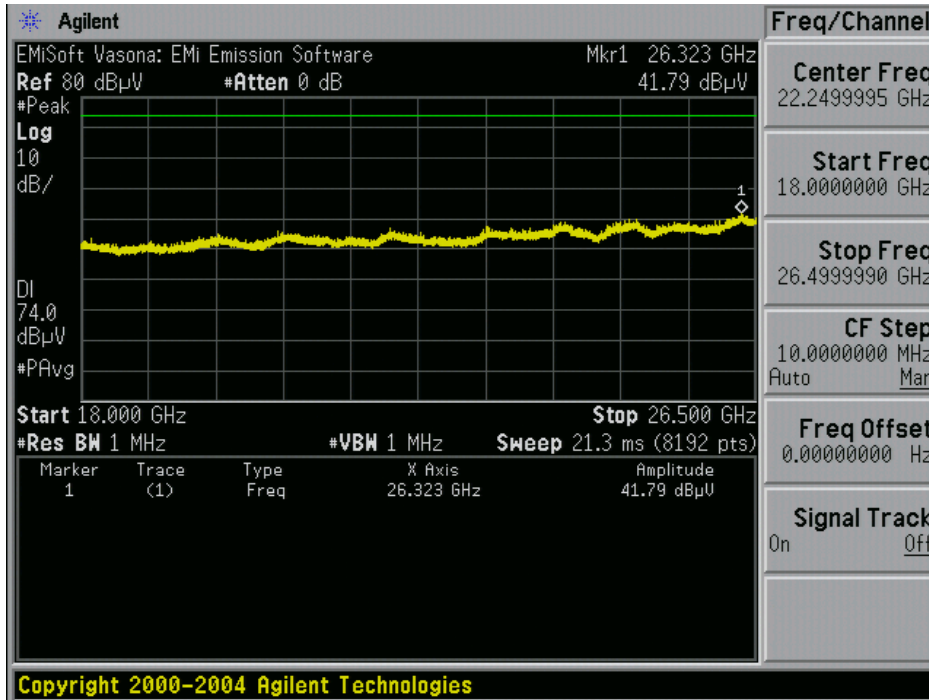
Horizontal



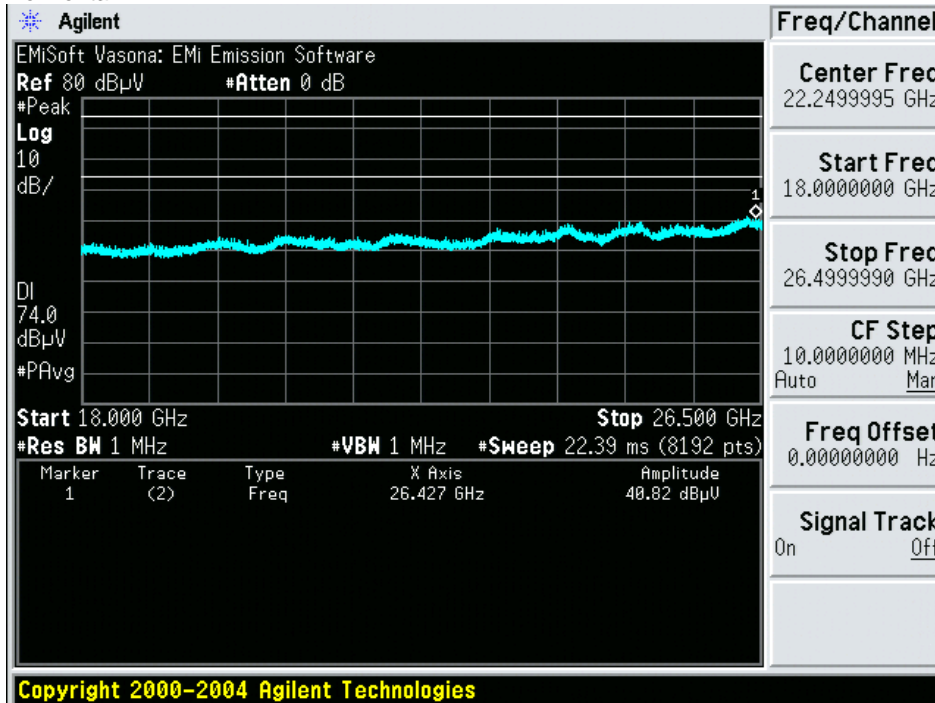


Radiated Transmitter Spurs, All rate, All modes, Peak

Vertical



Horizontal

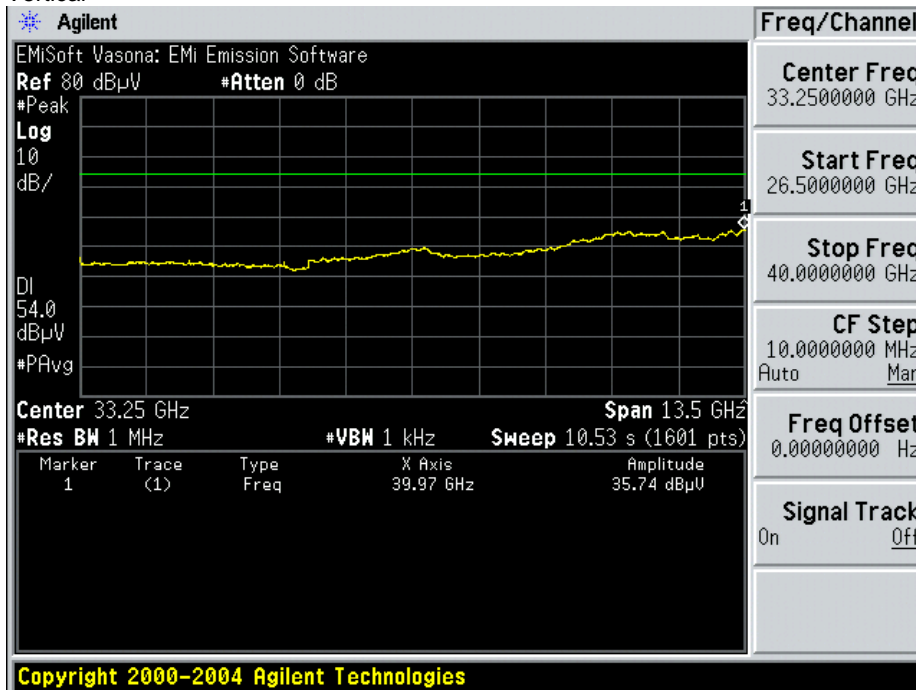




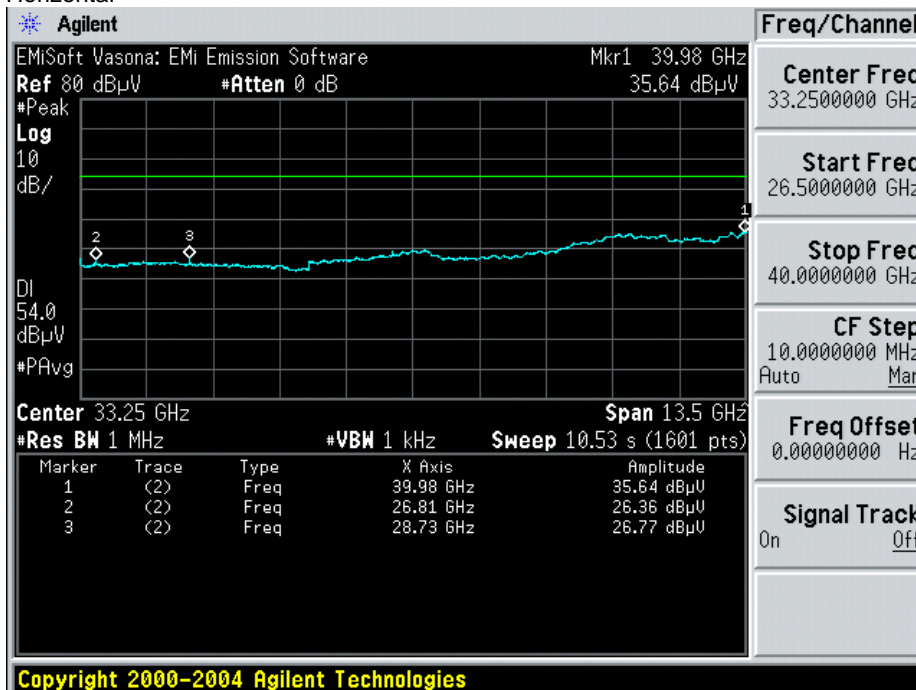
Transmitter Radiated Spurious Emissions (26GHz-40GHz)

Radiated Transmitter Spurs, All rate, All modes, Average

Vertical



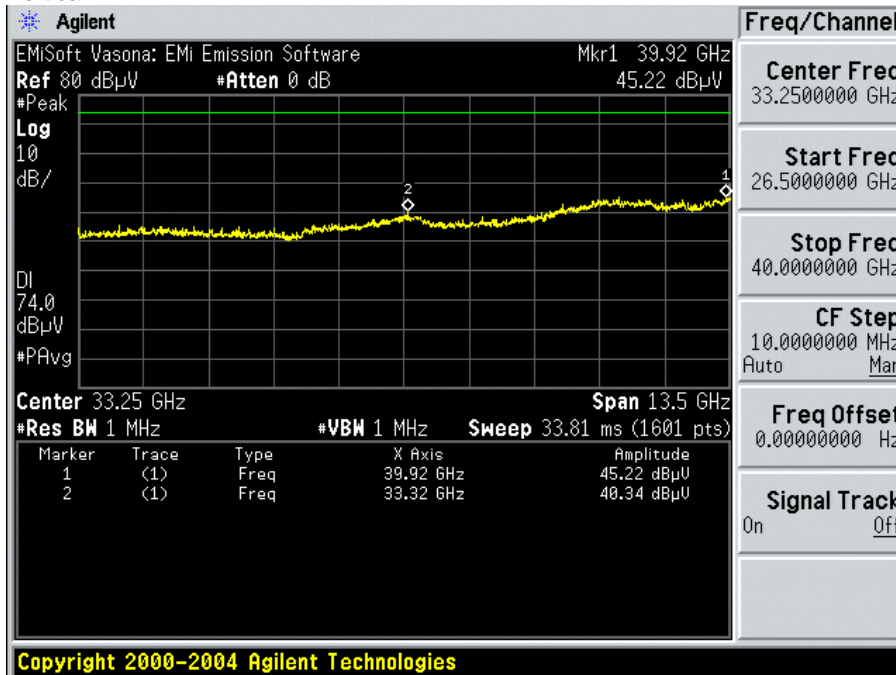
Horizontal



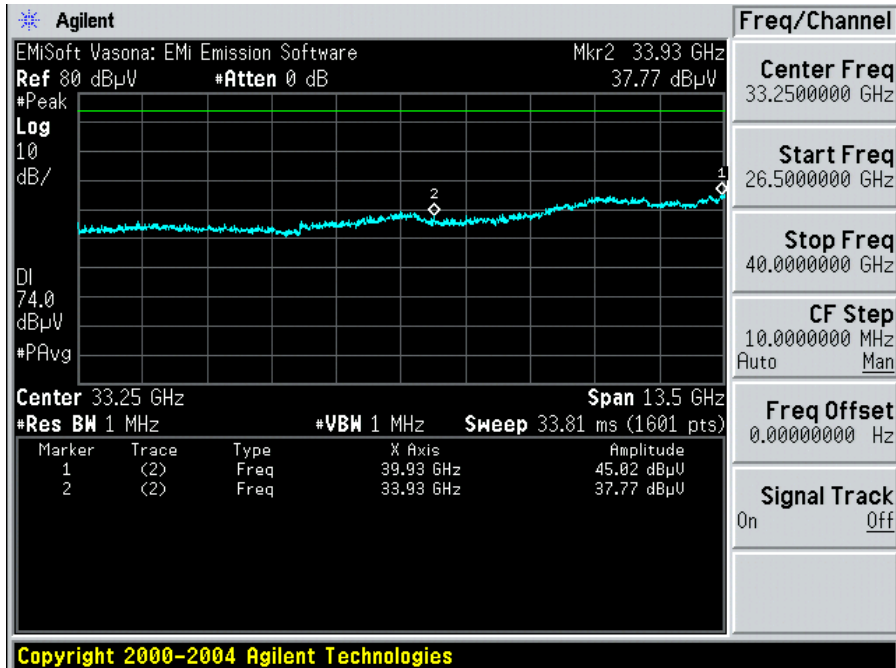


Radiated Transmitter Spurs, All rate, All modes, Peak

Vertical



Horizontal





Receiver Radiated Spurious Emissions (1GHz-18GHz)

Radiated Receiver Spurs, All rates, All Mode, Average



Radiated Receiver Spurs, All rates, All Mode, Peak

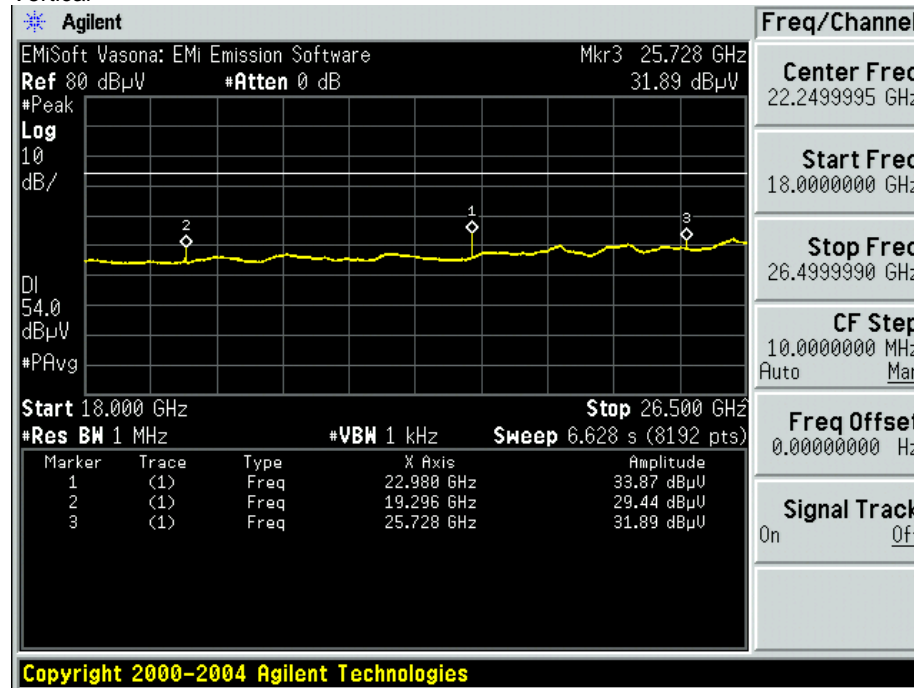




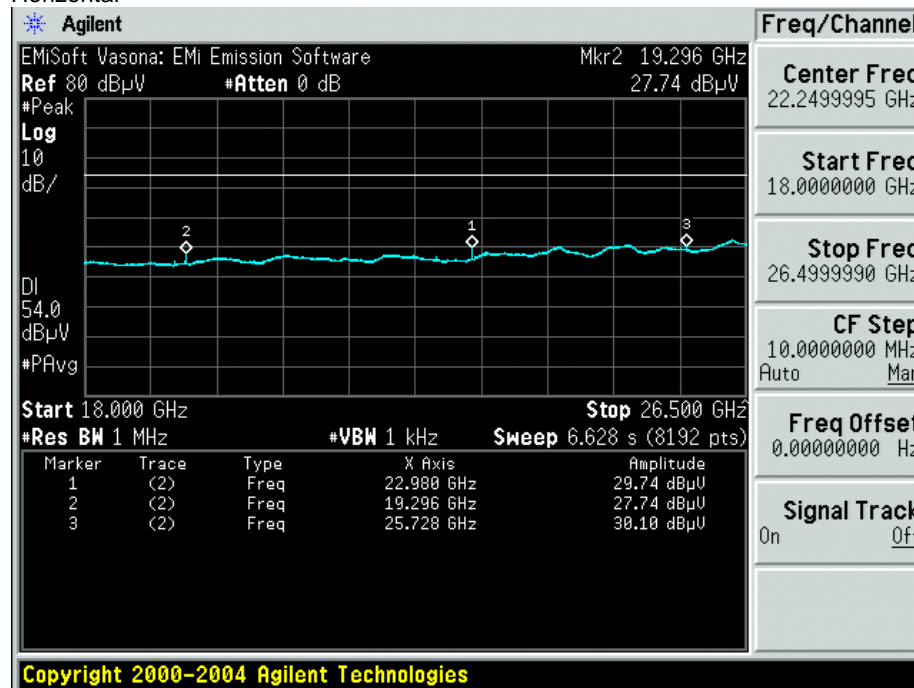
Receiver Radiated Spurious Emissions (18GHz-26GHz)

Radiated Receiver Spurs, All rates, All Mode, Average

Vertical



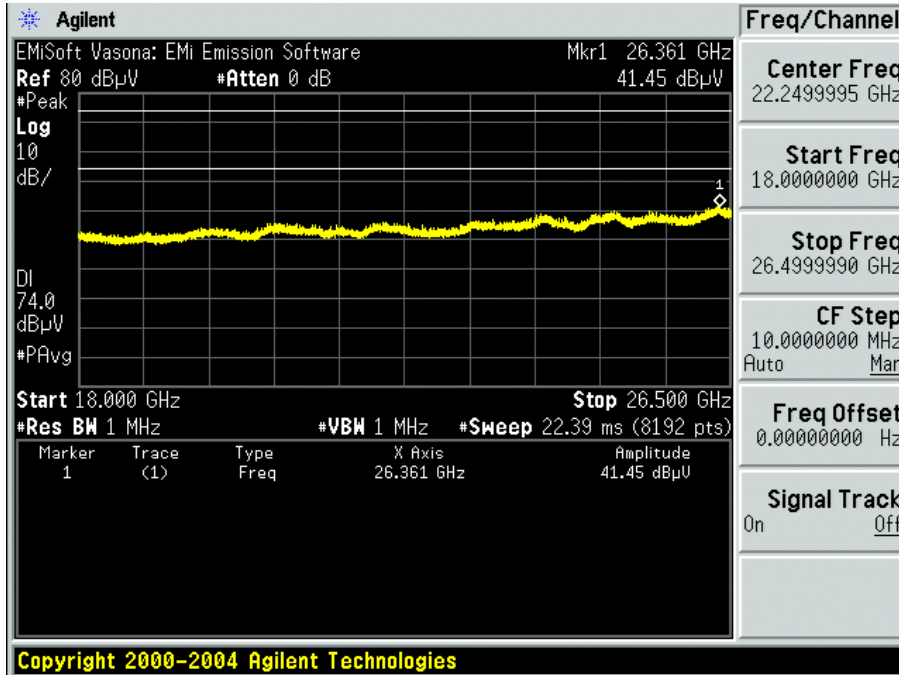
Horizontal



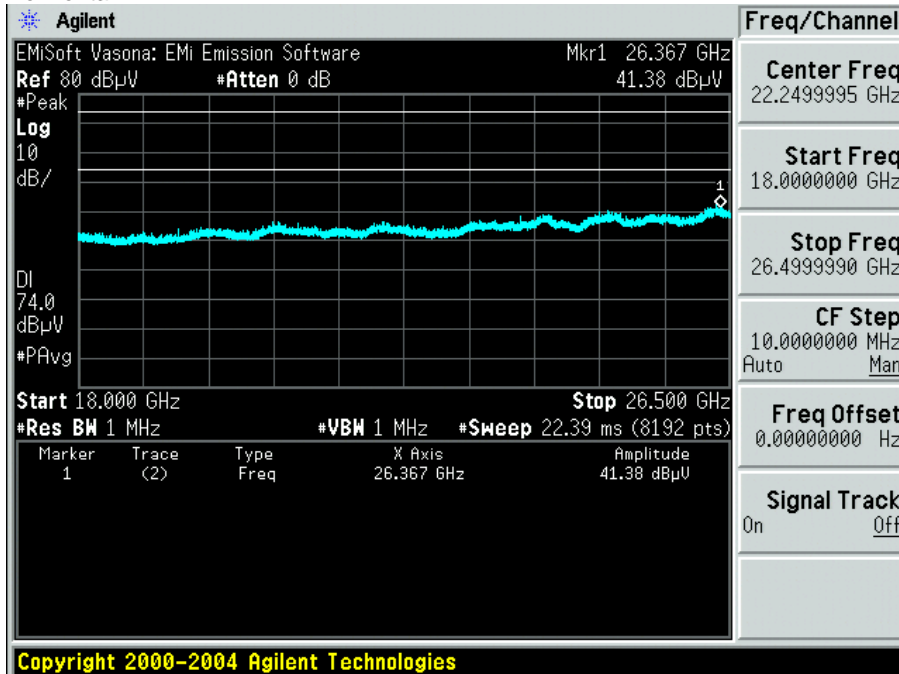


Radiated Receiver Spurs, All rates, All Mode, Peak

Vertical



Horizontal

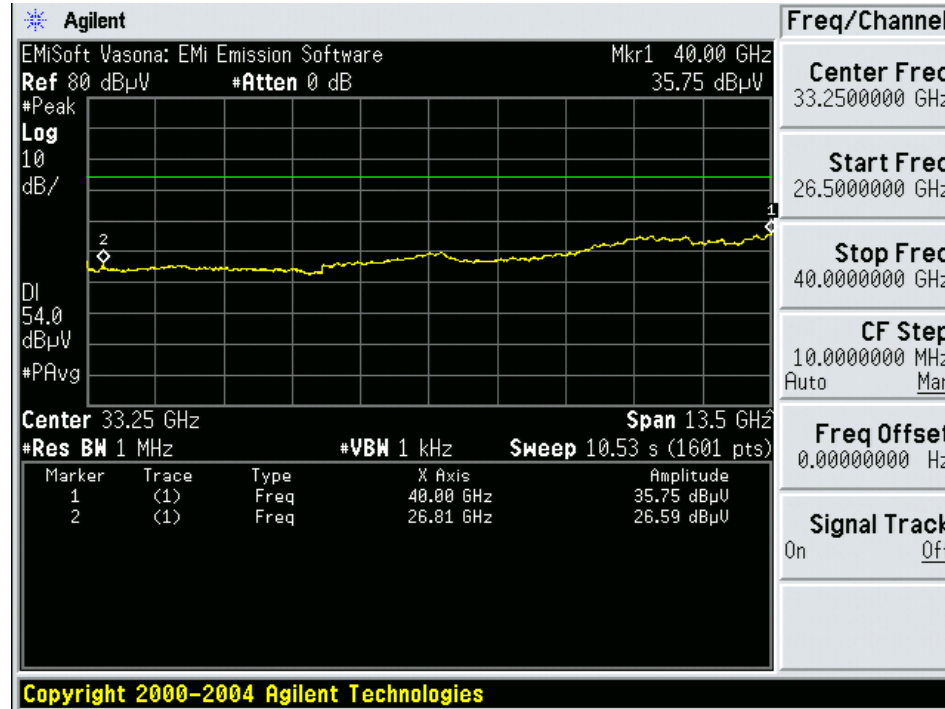




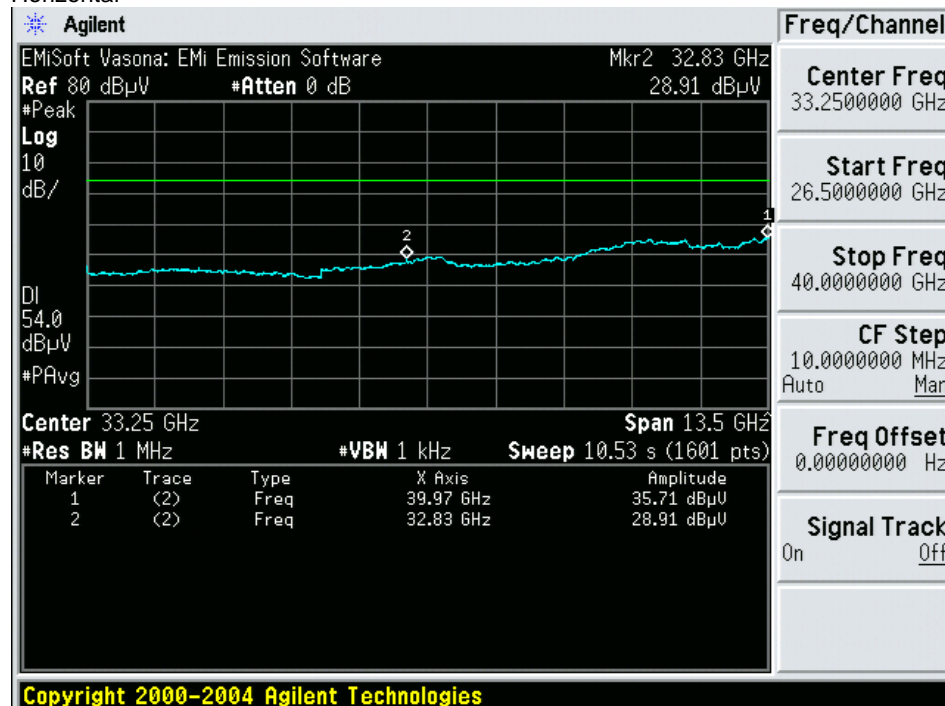
Receiver Radiated Spurious Emissions (26GHz-40GHz)

Radiated Receiver Spurs, All rates, All Mode, Average

Vertical



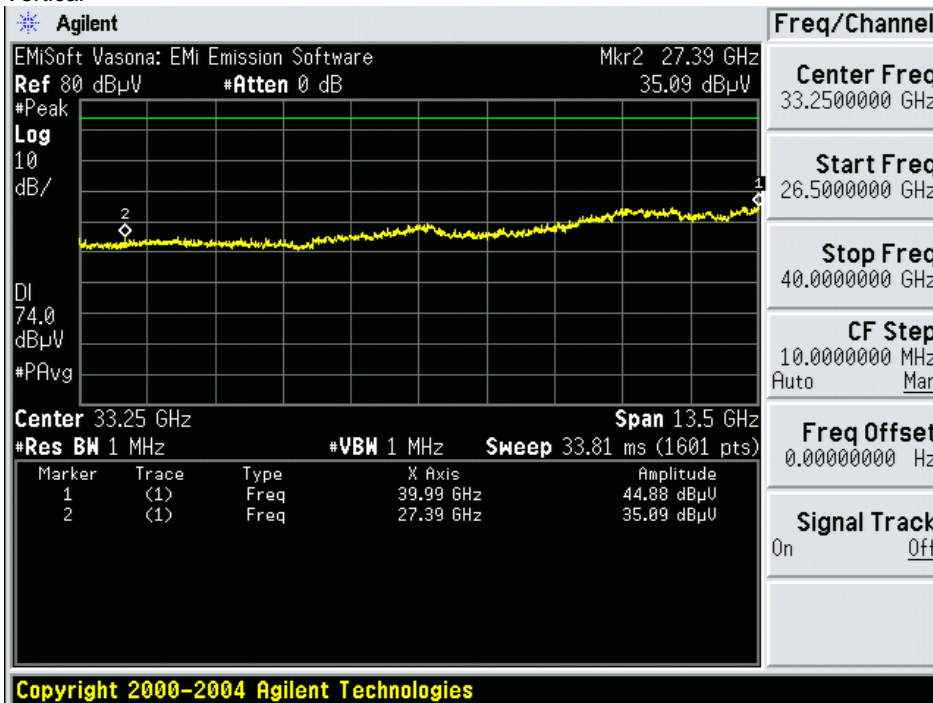
Horizontal



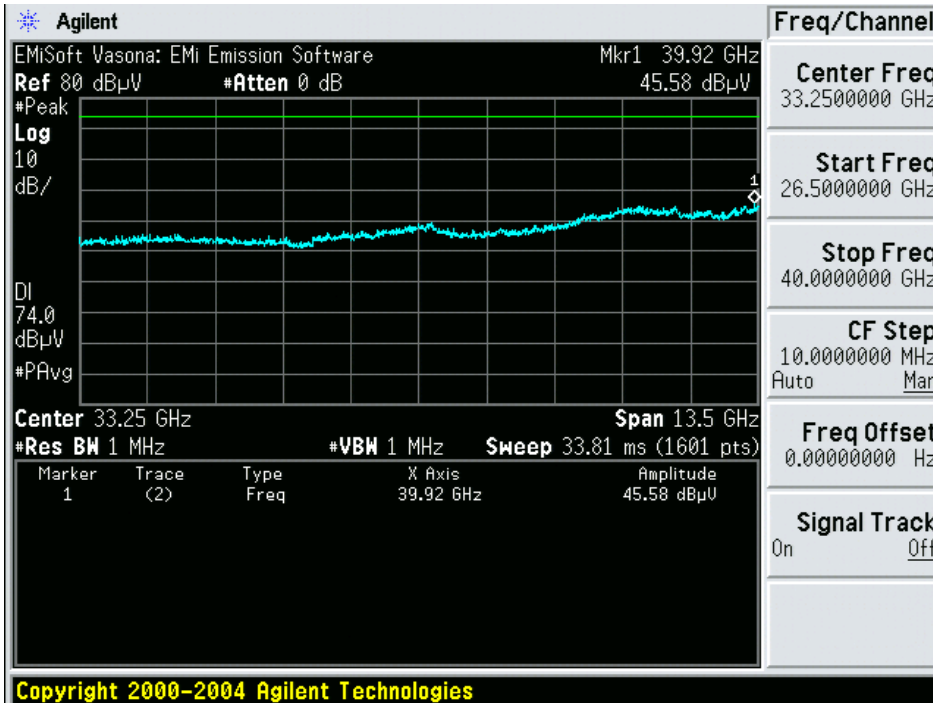


Radiated Receiver Spurs, All rates, All Mode, Peak

Vertical



Horizontal





Radiated Emissions (30M-1G)

Transmitter Radiated Emission



Receiver Radiated Emission





Title: Radiated Emissions Configuration Photograph

**Appendix C: Test Equipment/Software Used to perform the test**

| Cis Number | Manufacturer | Model | Description | Calibration Due Date |
|------------|------------------|-----------------------|---|----------------------|
| 3003 | HP | 83731B | Synthesized Signal Generator | 3/13/2016 |
| 4882 | EMC Test Systems | 3115 | Double Ridged Guide Horn Antenna | 7/24/2015 |
| 5691 | Miteq | NSP1800-25-S1 | Broadband Preamplifier (1-18GHz) | 1/29/2016 |
| 8166 | HP | 8491B Opt 010 | 10dB Attenuator | 2/2/2016 |
| 20975 | Micro-Coax | UFB311A-0-1344-520520 | RF Coaxial Cable, to 18GHz, 134.4 in | 2/18/2016 |
| 30559 | Micro-Coax | UFB311A-1-0950-504504 | RF Coaxial Cable, to 18GHz, 95 in | 2/20/2016 |
| 30652 | Sunol Sciences | JB1 | Combination Antenna, 30MHz-2GHz | 11/5/2015 |
| 33988 | Agilent | E4446A | Spectrum Analyzer, 3Hz-44GHz | 12/9/2015 |
| 41929 | Newport | iBTHP-5-DB9 | 5 inch Temp/RH/Press Sensor w/20ft cable | 12/20/2015 |
| 41979 | Cisco | 1840 | 18-40GHz EMI Test Head/Verification Fixture | 7/9/2015 |
| 43124 | Cisco | Above 1GHz Site Cal | Above 1GHz Cisp Site Verification | 1/15/2016 |
| CIS-50378 | Agilent | N9030A | PXA Spectrum Analyzer | 1/5/2016 |
| 47282 | Huber + Suhner | Sucoflex 102E | 40GHz Cable K Connector | 5/2/2015 |
| 47410 | Agilent | N9038A | EMI Receiver | 1/5/2016 |
| 51642 | Huber+Suhner | Sucoflex 106PA | RF N Type Cable 8.5m | 2/10/2016 |
| 51684 | Dynaware | 5400-9810-6251 | SMA 50 Ohm Termination 18GHz | 5/22/2015 |
| 51690 | Dynaware | 5400-9810-6251 | SMA 50 Ohm Termination 18GHz | 5/22/2015 |
| 51692 | Dynaware | 5400-9810-6251 | SMA 50 Ohm Termination 18GHz | 5/22/2015 |
| 51695 | Dynaware | 5400-9810-6251 | SMA 50 Ohm Termination 18GHz | 5/22/2015 |
| CIS-32307 | Micro-Tronics | BRM50702-02 | 2.4-2.5G Notch Filter | 10/3/2015 |
| CIS-35606 | Micro-Tronics | BRC50704-02 | 5.47-5.725G Notch Filter | 10/3/2015 |
| CIS-43988 | Micro-Tronics | BRC50703-02 | 5.15-5.35G Notch Filter | 10/3/2015 |
| CIS-43989 | Micro-Tronics | BRC50705-02 | 5.725-5.875G Notch Filter | 10/3/2015 |

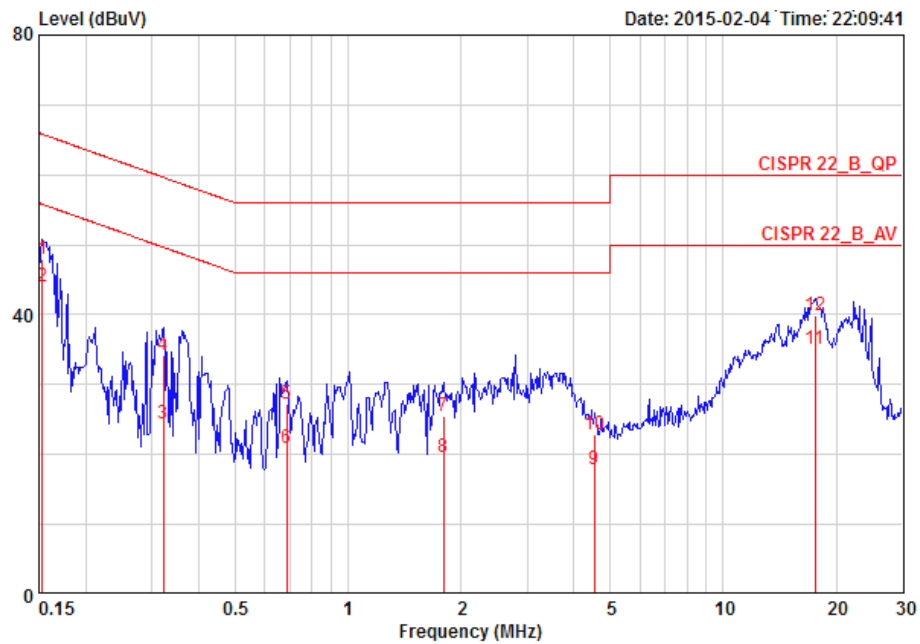


Appendix D: AC Conducted Emission

1.1. Test Result of AC Power Ports

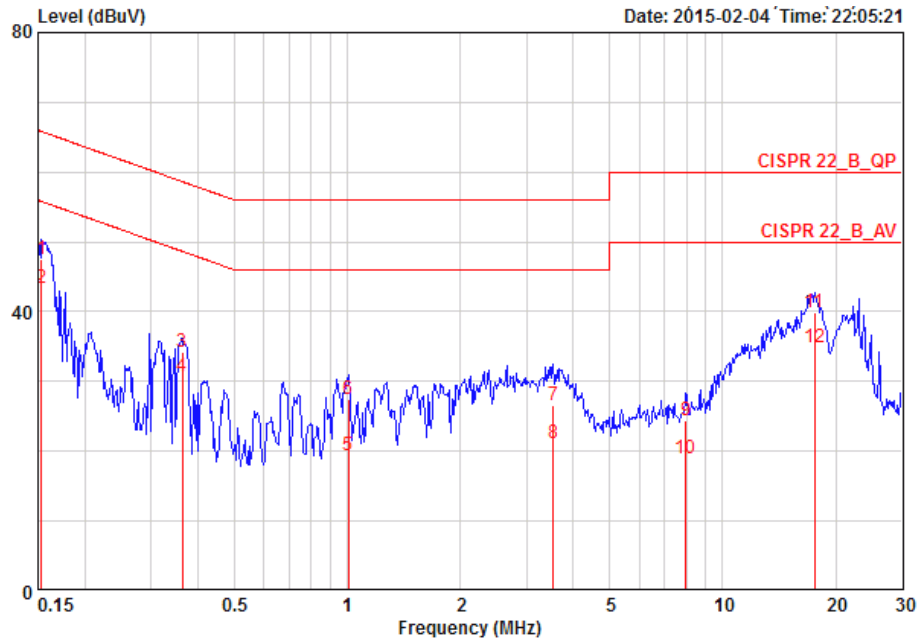
| | | | |
|--|------------|------------------------|--------------------|
| Temperature | 21°C | Humidity | 60% |
| Test Engineer | Parody Lin | Frequency Range | 0.15 MHz to 30 MHz |
| Test Mode | Mode 1 | | |
| <ul style="list-style-type: none"> ▪ Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level ▪ Margin = - Limit + (Read Level + LISN Factor + Cable Loss) ▪ All emissions not reported here are more than 10 dB below the prescribed limit. ▪ The test was passed at the minimum margin that marked by a frame in the following table | | | |

Line



| | Freq | Level | Over | Limit | Read | LISN | Cable | Remark | Pol/Phase |
|----|---------|-------|--------|-------|-------|-------|-------|---------|-----------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | | |
| 1 | 0.15321 | 47.93 | -17.89 | 65.82 | 37.70 | 10.03 | 0.20 | QP | LINE |
| 2 | 0.15321 | 43.94 | -11.88 | 55.82 | 33.71 | 10.03 | 0.20 | AVERAGE | LINE |
| 3 | 0.32169 | 24.31 | -25.35 | 49.66 | 14.00 | 10.03 | 0.28 | AVERAGE | LINE |
| 4 | 0.32169 | 34.31 | -25.35 | 59.66 | 24.00 | 10.03 | 0.28 | QP | LINE |
| 5 | 0.68626 | 27.17 | -28.83 | 56.00 | 16.83 | 10.02 | 0.32 | QP | LINE |
| 6 | 0.68626 | 20.97 | -25.03 | 46.00 | 10.63 | 10.02 | 0.32 | AVERAGE | LINE |
| 7 | 1.800 | 25.59 | -30.41 | 56.00 | 15.21 | 10.03 | 0.35 | QP | LINE |
| 8 | 1.800 | 19.52 | -26.48 | 46.00 | 9.14 | 10.03 | 0.35 | AVERAGE | LINE |
| 9 | 4.525 | 17.91 | -28.09 | 46.00 | 7.50 | 10.04 | 0.38 | AVERAGE | LINE |
| 10 | 4.525 | 22.97 | -33.03 | 56.00 | 12.56 | 10.04 | 0.38 | QP | LINE |
| 11 | 17.568 | 35.05 | -14.95 | 50.00 | 24.38 | 10.20 | 0.47 | AVERAGE | LINE |
| 12 | 17.568 | 39.81 | -20.19 | 60.00 | 29.14 | 10.20 | 0.47 | QP | LINE |

Neutral



| | Freq | Level | Over | Limit | Read | LISN | Cable | Remark | Pol/Phase |
|----|---------|-------|--------|-------|-------|--------|-------|---------|-----------|
| | MHz | dBuV | Limit | Line | Level | Factor | Loss | | |
| | | | dB | dBuV | dBuV | dB | dB | | |
| 1 | 0.15321 | 47.54 | -18.28 | 65.82 | 37.40 | 9.94 | 0.20 | QP | NEUTRAL |
| 2 | 0.15321 | 43.29 | -12.53 | 55.82 | 33.15 | 9.94 | 0.20 | AVERAGE | NEUTRAL |
| 3 | 0.36338 | 34.12 | -24.53 | 58.65 | 23.93 | 9.89 | 0.29 | QP | NEUTRAL |
| 4 | 0.36338 | 30.84 | -17.81 | 48.65 | 20.65 | 9.89 | 0.29 | AVERAGE | NEUTRAL |
| 5 | 1.005 | 19.43 | -26.57 | 46.00 | 9.21 | 9.89 | 0.33 | AVERAGE | NEUTRAL |
| 6 | 1.005 | 27.40 | -28.60 | 56.00 | 17.18 | 9.89 | 0.33 | QP | NEUTRAL |
| 7 | 3.547 | 26.61 | -29.39 | 56.00 | 16.35 | 9.89 | 0.37 | QP | NEUTRAL |
| 8 | 3.547 | 21.05 | -24.95 | 46.00 | 10.79 | 9.89 | 0.37 | AVERAGE | NEUTRAL |
| 9 | 7.977 | 24.34 | -35.66 | 60.00 | 14.04 | 9.90 | 0.40 | QP | NEUTRAL |
| 10 | 7.977 | 18.93 | -31.07 | 50.00 | 8.63 | 9.90 | 0.40 | AVERAGE | NEUTRAL |
| 11 | 17.568 | 39.84 | -20.16 | 60.00 | 29.34 | 10.02 | 0.47 | QP | NEUTRAL |
| 12 | 17.568 | 34.88 | -15.12 | 50.00 | 24.38 | 10.02 | 0.47 | AVERAGE | NEUTRAL |