





## **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
Reference Level:	80 dBuV
Attenuation:	10 dB
Sweep Time:	Coupled
Resolution Bandwidth:	1MHz
Video Bandwidth:	1 MHz for peak, 10 Hz 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.  
There are no measurable emissions above 18 GHz.

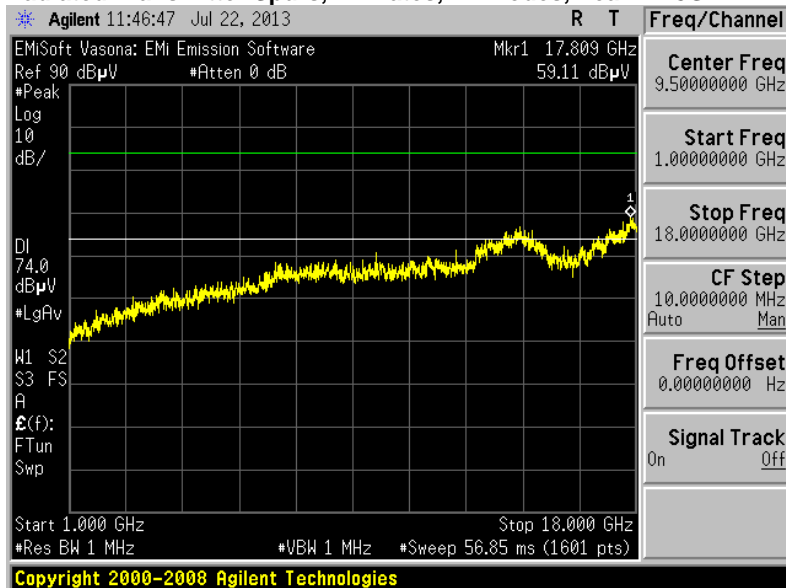


## Transmitter Radiated Spurious Emissions

### Radiated Transmitter Spurs, All Rates, All Modes, Average 1-18GHz



### Radiated Transmitter Spurs, All Rates, All Modes, Peak 1-18GHz

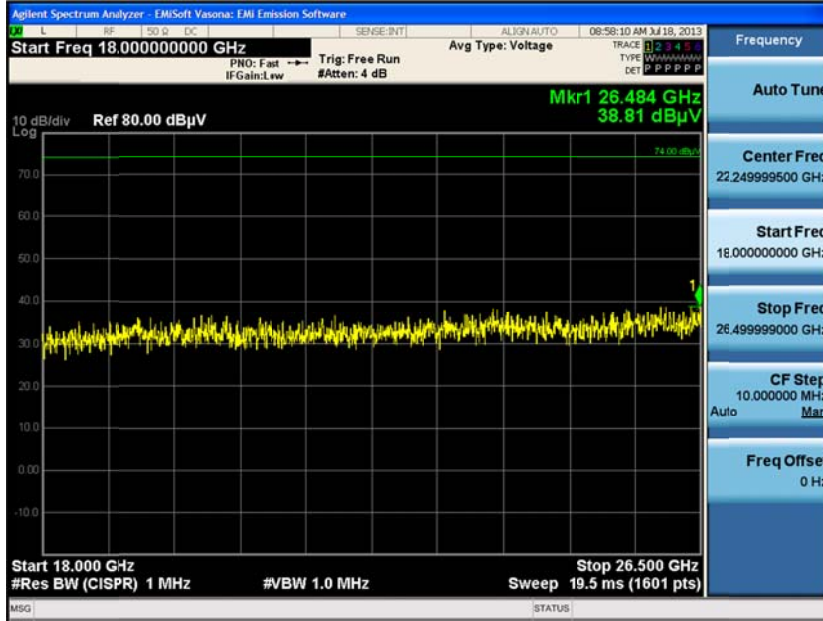




**Radiated Transmitter Spurs, All Rates, All Modes, Average 18-26.5 GHz**



**Radiated Transmitter Spurs, All Rates, All Modes, Peak 18-26.5 GHz**

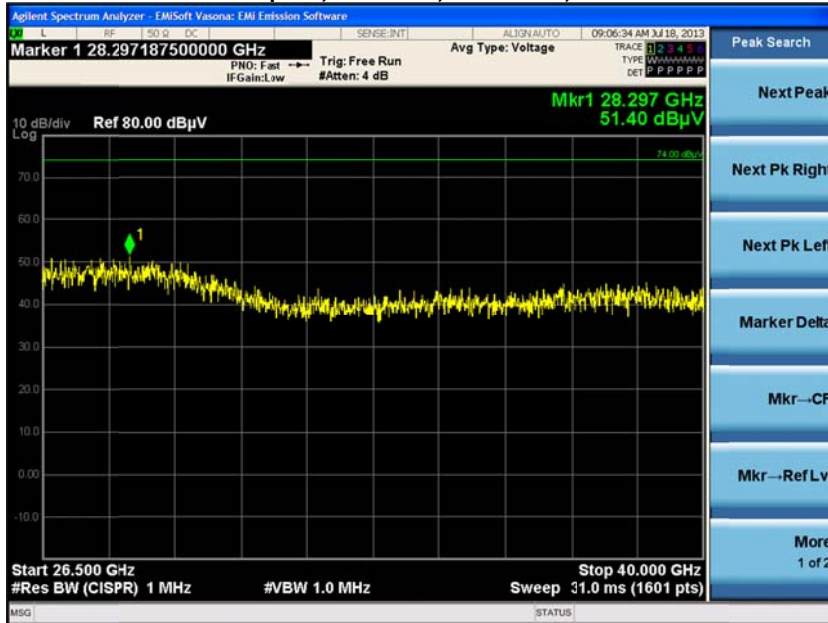




**Radiated Transmitter Spurs, All Rates, All Modes, Average 26.5-40 GHz**



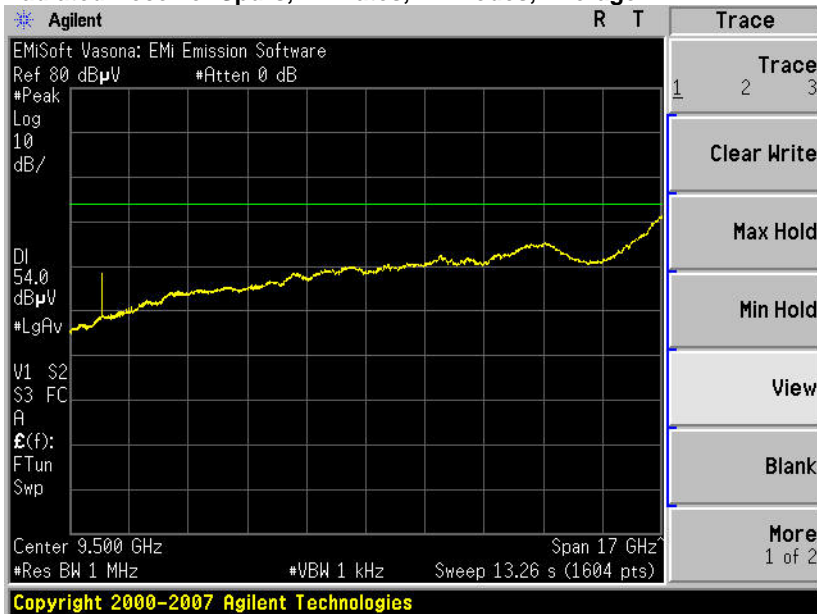
**Radiated Transmitter Spurs, All Rates, All Modes, Peak 18-26.5 GHz**



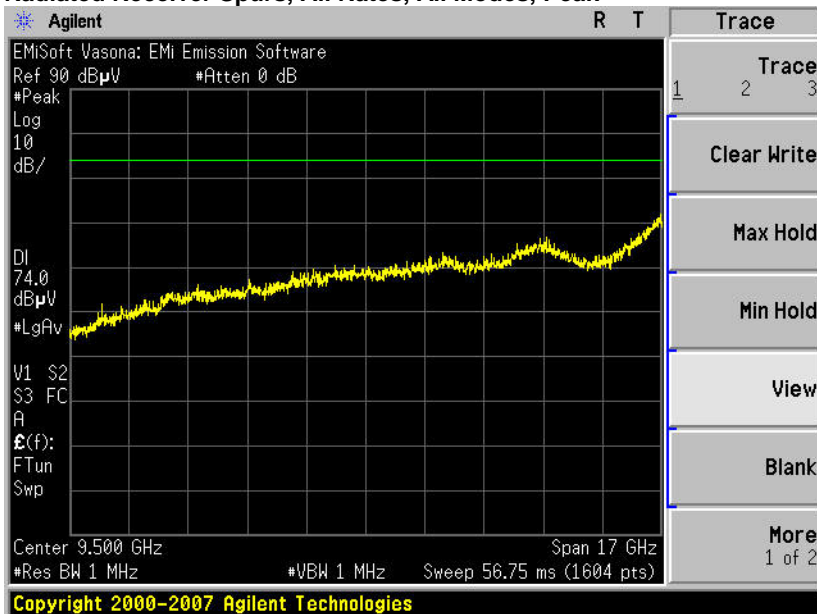


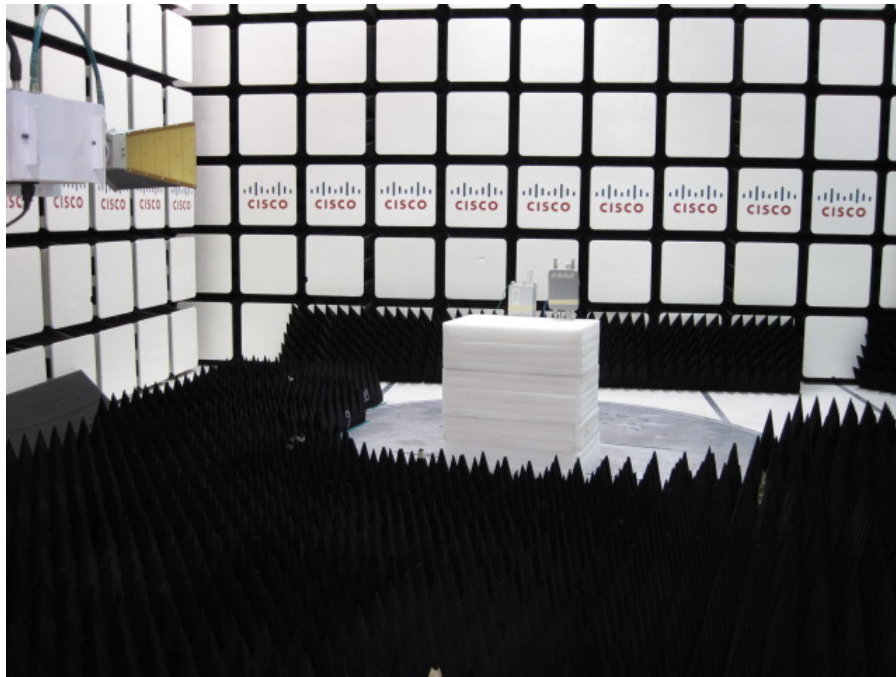
## Receiver Radiated Spurious Emissions

### Radiated Receiver Spurs, All Rates, All Modes, Average

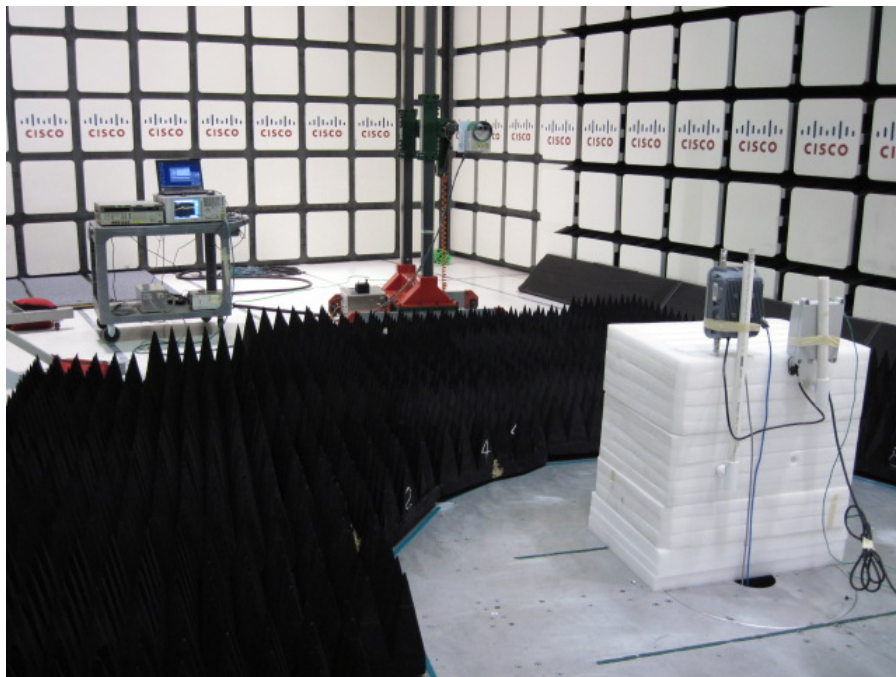


### Radiated Receiver Spurs, All Rates, All Modes, Peak





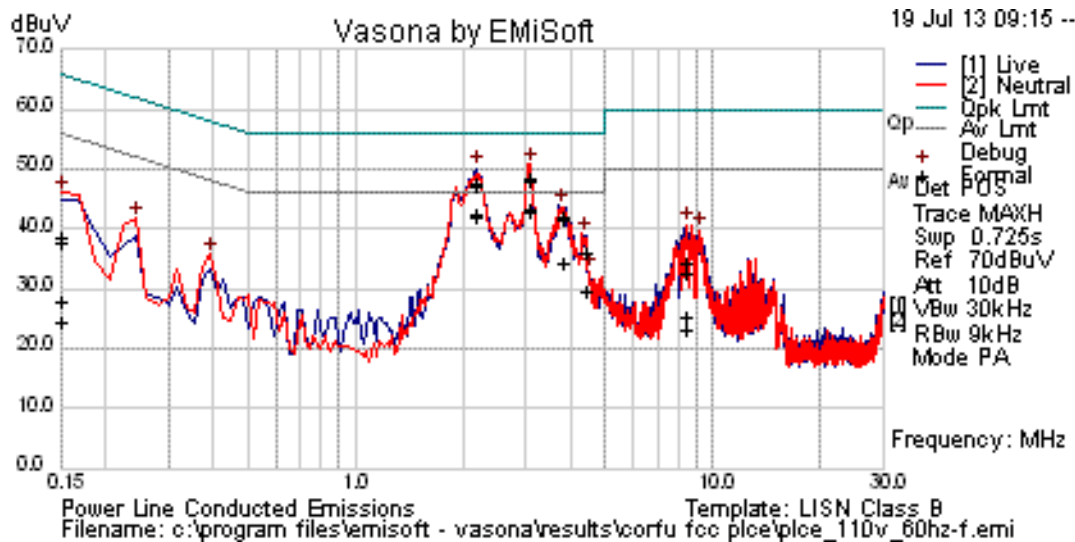
**Radiated Test Setup 1–18GHz**



**Radiated Test Setup 18–40GHz**



## Conducted Emissions



No	Frequency MHz	Raw dBuV	Cable Loss	Factors dB	Level dBuV	Measurement Type	Line	Limit dBuV	Margin dB	Pass /Fail
1	3.079	23.2	20.0	.0	43.2	Average	Neutral	46.0	-2.8	Pass
2	3.079	23.1	20.0	.0	43.1	Average	Live	46.0	-2.9	Pass
3	2.183	22.3	20.0	.0	42.3	Average	Neutral	46.0	-3.7	Pass
4	2.184	22.2	20.0	.0	42.2	Average	Live	46.0	-3.8	Pass
5	3.079	28.3	20.0	.0	48.3	Quasi Peak	Neutral	56.0	-7.7	Pass
6	3.079	28.2	20.0	.0	48.2	Quasi Peak	Live	56.0	-7.8	Pass
7	2.183	27.4	20.0	.0	47.5	Quasi Peak	Neutral	56.0	-8.6	Pass
8	2.184	27.3	20.0	.0	47.3	Quasi Peak	Live	56.0	-8.7	Pass
9	3.819	14.3	20.0	.1	34.3	Average	Neutral	46.0	-11.7	Pass
10	3.819	14.3	20.0	.1	34.3	Average	Live	46.0	-11.7	Pass
11	3.819	22.0	20.0	.1	42.0	Quasi Peak	Neutral	56.0	-14.0	Pass
12	3.819	21.6	20.0	.1	41.6	Quasi Peak	Live	56.0	-14.4	Pass
13	4.420	9.5	20.0	.1	29.5	Average	Neutral	46.0	-16.5	Pass
14	4.420	9.4	20.0	.1	29.5	Average	Live	46.0	-16.5	Pass
15	4.420	16.1	20.0	.1	36.2	Quasi Peak	Live	56.0	-19.8	Pass
16	4.420	16.0	20.0	.1	36.1	Quasi Peak	Neutral	56.0	-19.9	Pass
17	8.469	5.0	20.1	.1	25.2	Average	Neutral	50.0	-24.8	Pass
18	8.469	14.3	20.1	.1	34.5	Quasi Peak	Neutral	60.0	-25.5	Pass
19	8.469	2.8	20.1	.1	23.0	Average	Live	50.0	-27.0	Pass
20	.150	17.3	21.4	.1	38.8	Quasi Peak	Neutral	66.0	-27.2	Pass



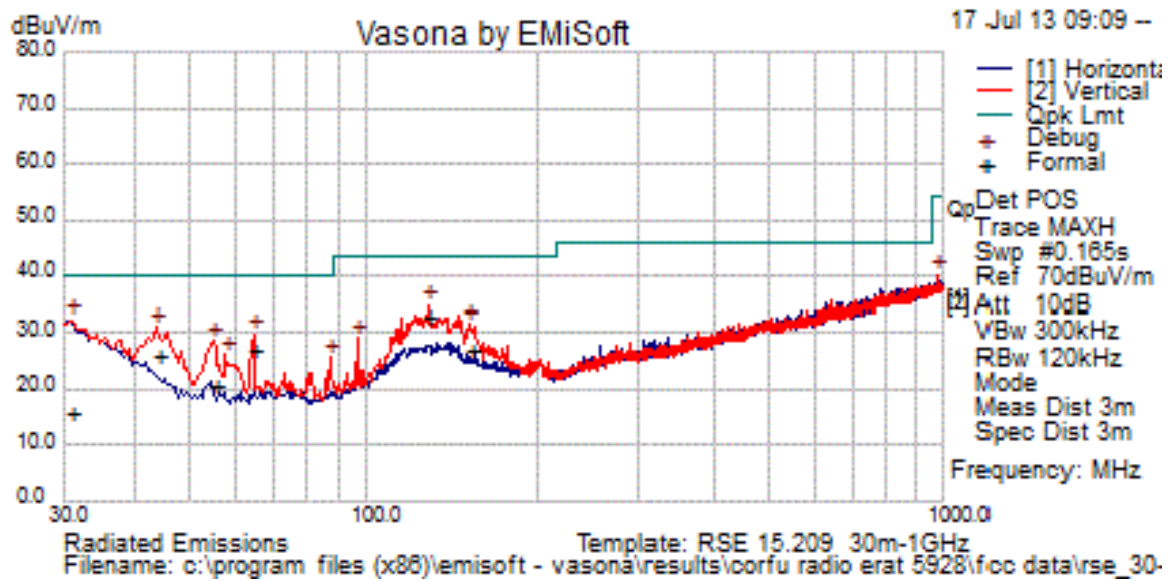
21	8.469	12.6	20.1	.1	32.8	Quasi Peak	Live	60.0	-27.2	Pass
22	.150	6.3	21.4	.1	27.8	Average	Neutral	56.0	-28.2	Pass
23	.150	16.2	21.4	.1	37.7	Quasi Peak	Live	66.0	-28.3	Pass
24	.150	2.9	21.4	.1	24.4	Average	Live	56.0	-31.6	Pass



**Conducted Emissions Test Setup**



## Radiated emissions



### Test Results Table



**Title:** Radiated Emissions 30-1000MHz Configuration Photograph