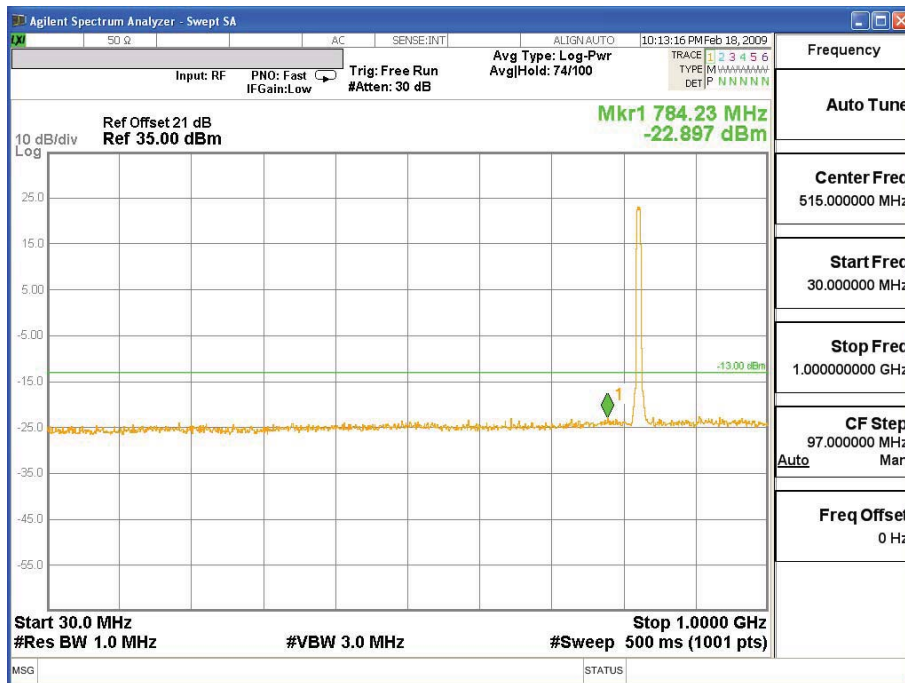




Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA	Test Range	30MHz~20GHz

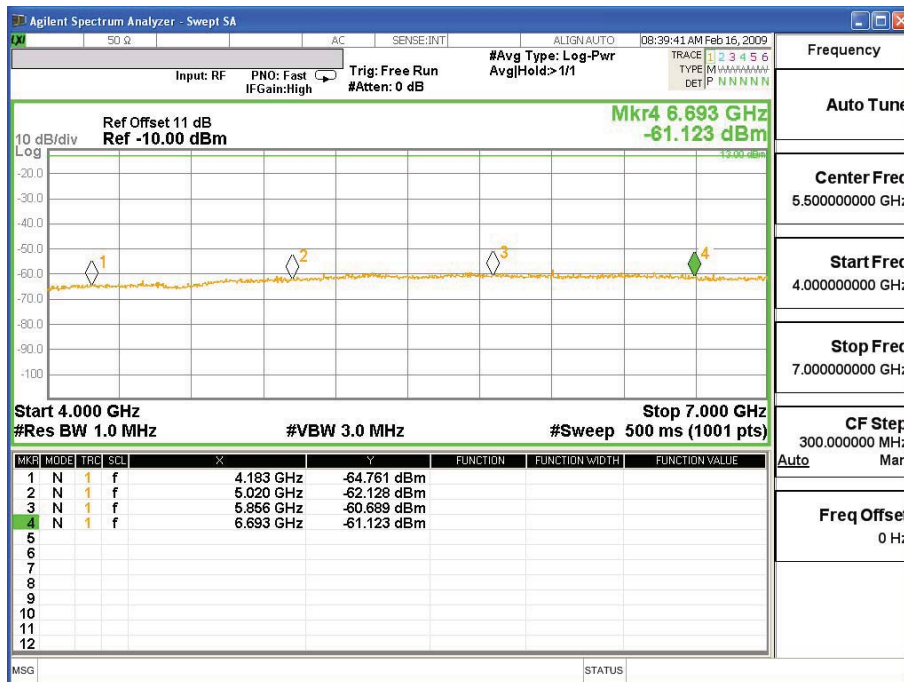
WCDMA BAND V HSDPA Mid-Channel 4183

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1673.2	-60.38	0.58	-59.80	-13
2509.8	-62.11	0.7	-61.41	-13
3346.4	-54.70	1.01	-53.69	-13
4183	-64.76	1.18	-63.58	-13
5019.6	-62.13	1.23	-60.90	-13
5856.2	-60.69	1.45	-59.24	-13
6692.8	-61.12	1.56	-59.56	-13
7529.4	-63.44	1.59	-61.85	-13
8366	-65.87	1.82	-64.05	-13





Frequency	
Auto Tune	
Center Freq	2.500000000 GHz
Start Freq	1.000000000 GHz
Stop Freq	4.000000000 GHz
CF Step	300.0000000 MHz
Auto	Man
Freq Offset	0 Hz



Frequency	
Auto Tune	
Center Freq	5.500000000 GHz
Start Freq	4.000000000 GHz
Stop Freq	7.000000000 GHz
CF Step	300.0000000 MHz
Auto	Man
Freq Offset	0 Hz

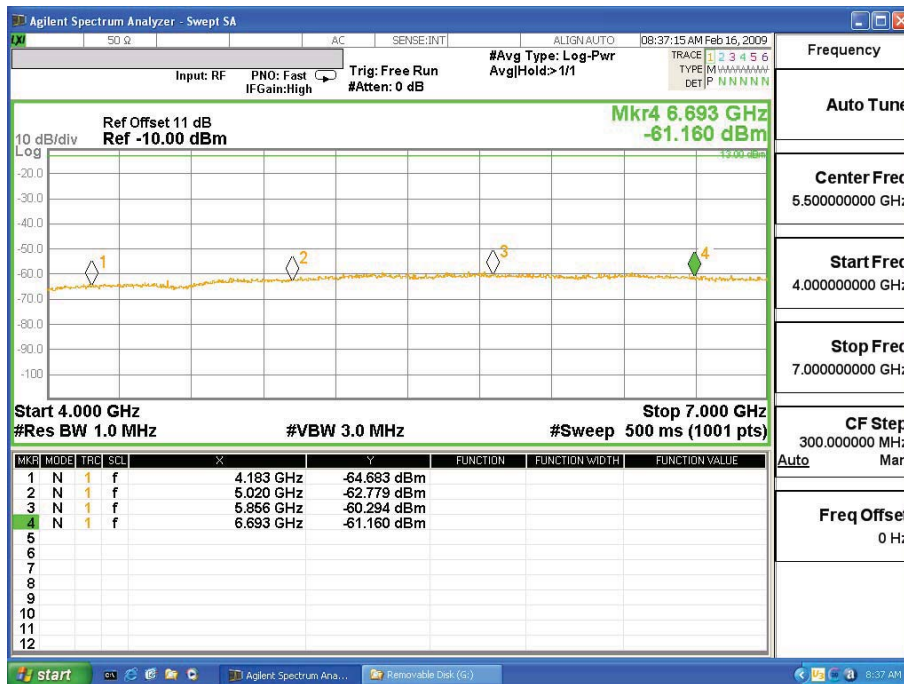
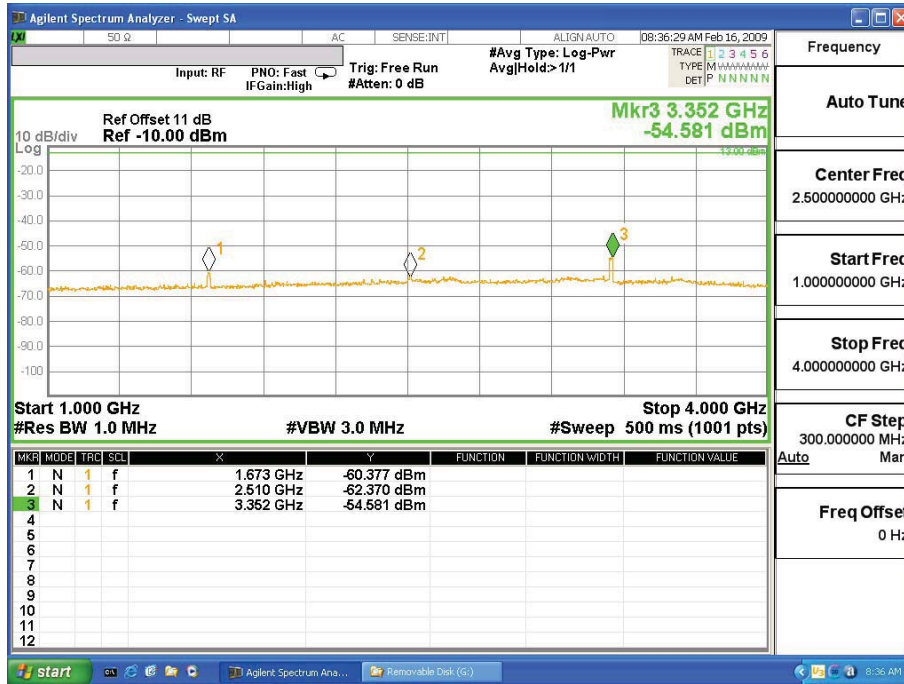


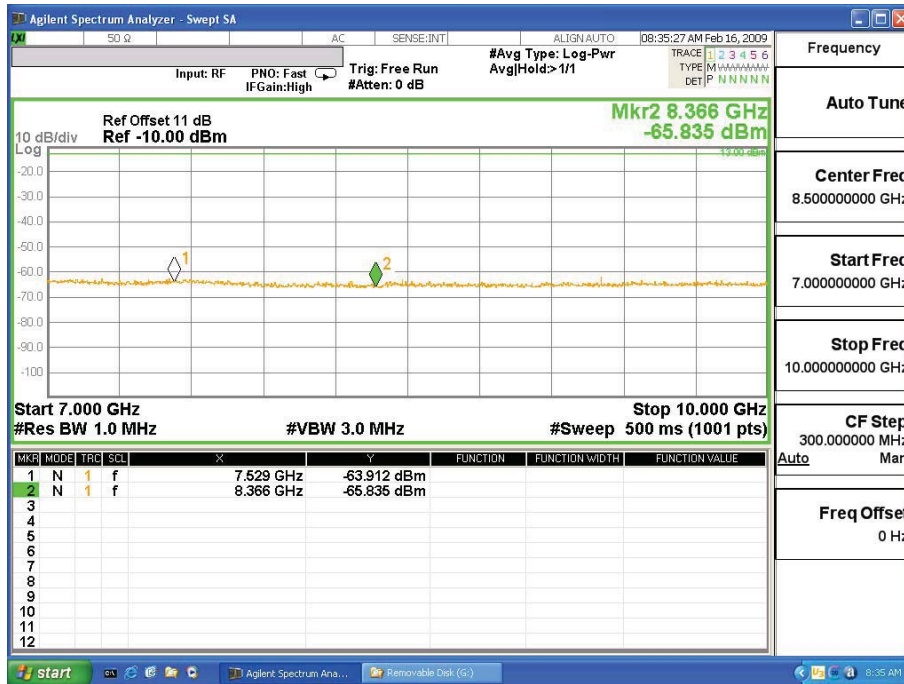
Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA	Test Range	30MHz~20GHz

WCDMA BAND V HSUPA Mid-Channel 4183

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1673.2	-60.38	0.58	-59.80	-13
2509.8	-62.37	0.7	-61.67	-13
3346.4	-54.58	1.01	-53.57	-13
4183	-64.68	1.18	-63.50	-13
5019.6	-62.78	1.23	-61.55	-13
5856.2	-60.29	1.45	-58.84	-13
6692.8	-61.16	1.56	-59.60	-13
7529.4	-63.91	1.59	-62.32	-13
8366	-65.84	1.82	-64.02	-13



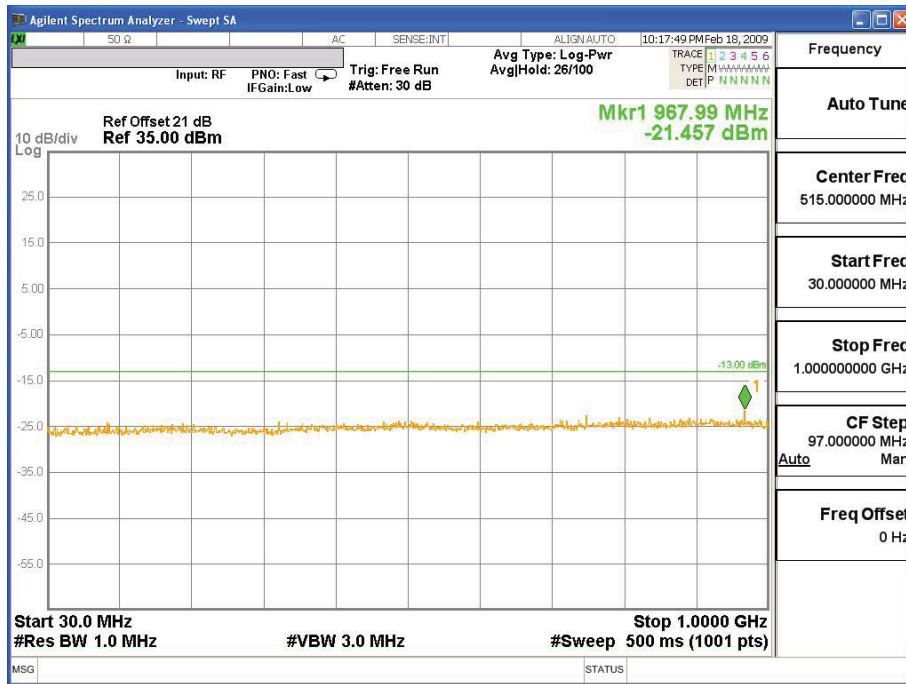


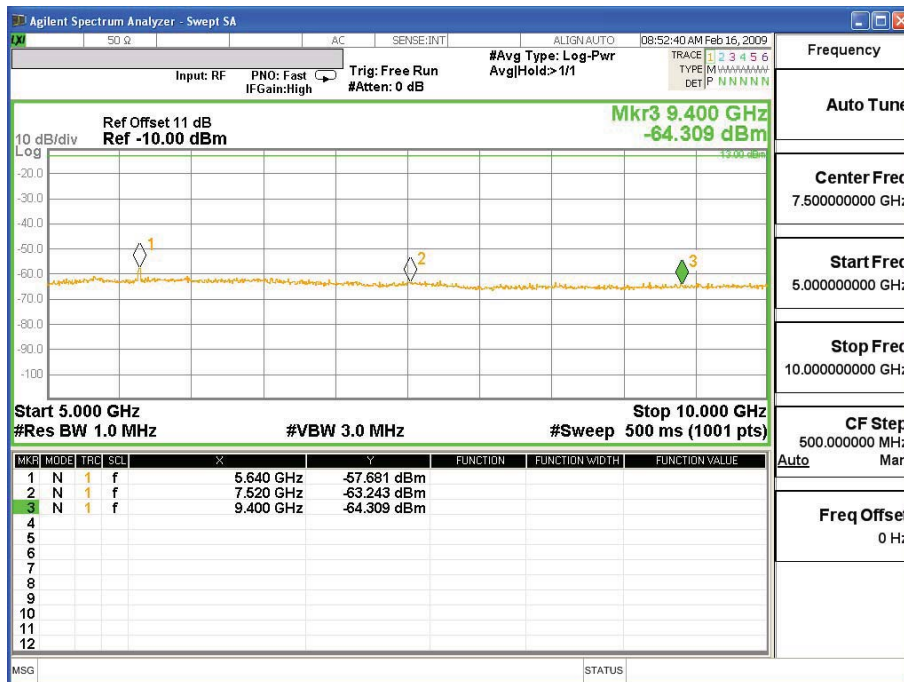


Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND II	Test Range	30MHz~20GHz

WCDMA BAND II Mid-Channel 9400

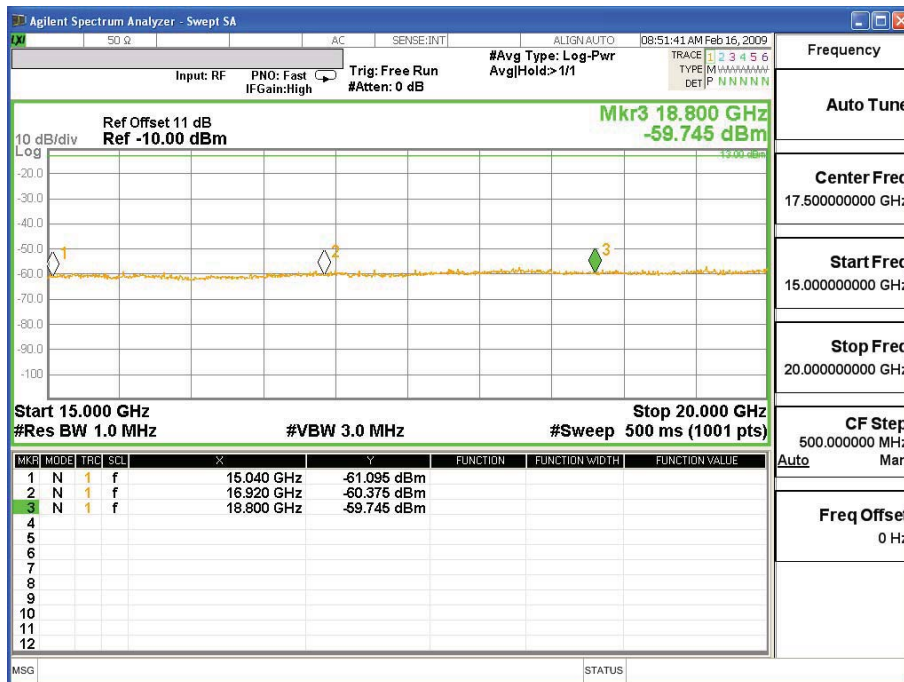
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-50.66	1.1	-49.56	-13
5640	-57.68	1.23	-56.45	-13
7520	-63.24	1.59	-61.65	-13
9400	-64.31	1.89	-62.42	-13
11280	-60.49	2.07	-58.42	-13
13160	-64.28	2.26	-62.02	-13
15040	-61.10	2.64	-58.46	-13
16920	-60.38	3.5	-56.88	-13
18800	-59.75	3.7	-56.05	-13







Frequency
Auto Tune
Center Freq 12.500000000 GHz
Start Freq 10.000000000 GHz
Stop Freq 15.000000000 GHz
CF Step 500.0000000 MHz
Auto Man
Freq Offset 0 Hz

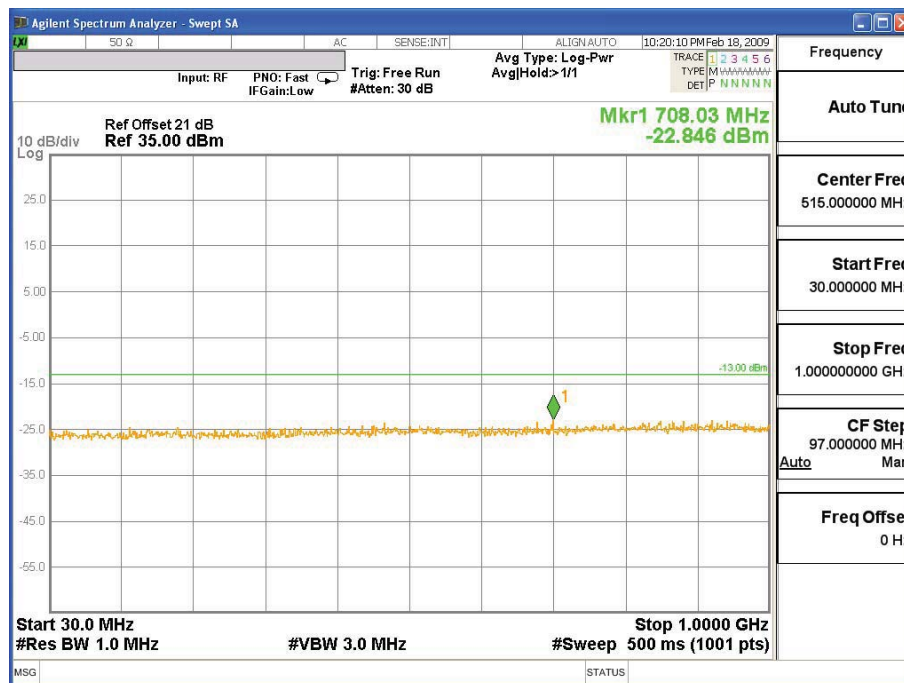


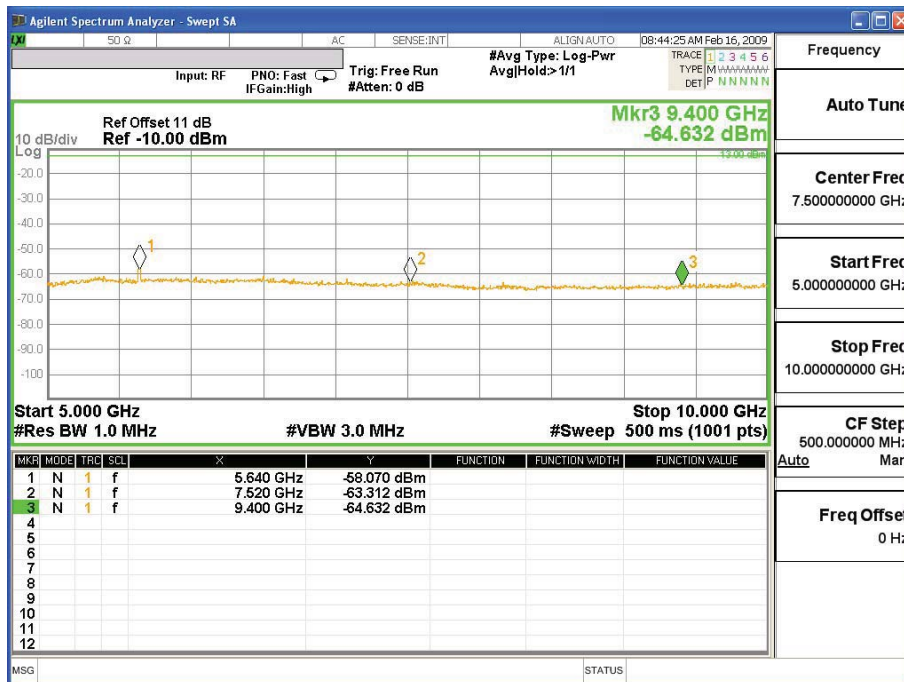
Frequency
Auto Tune
Center Freq 17.500000000 GHz
Start Freq 15.000000000 GHz
Stop Freq 20.000000000 GHz
CF Step 500.0000000 MHz
Auto Man
Freq Offset 0 Hz

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA	Test Range	30MHz~20GHz

WCDMA BAND II HSDPA Mid-Channel 9400

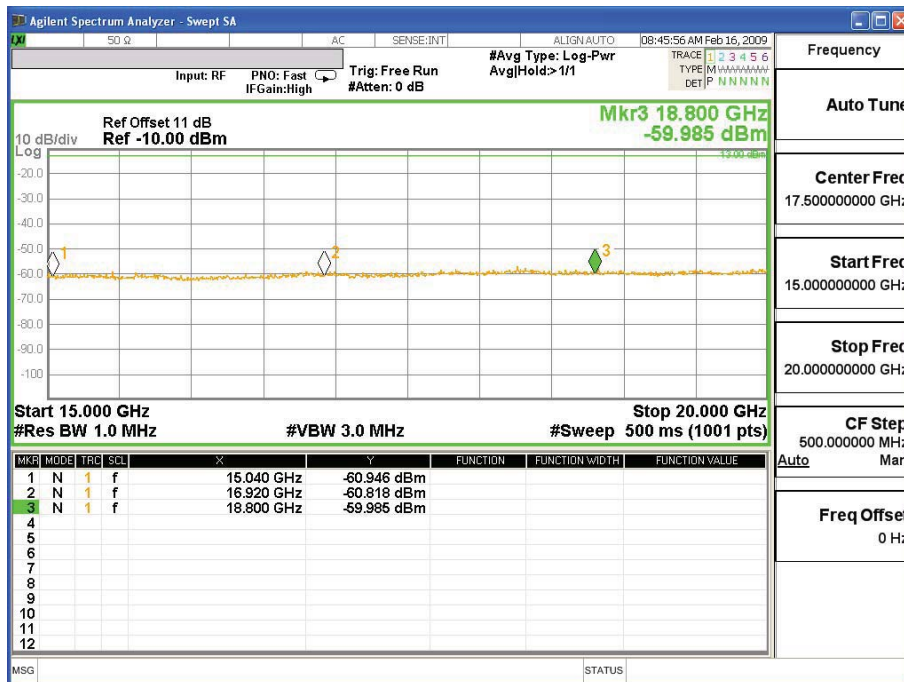
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-50.28	1.1	-49.18	-13
5640	-58.07	1.23	-56.84	-13
7520	-63.31	1.59	-61.72	-13
9400	-64.63	1.89	-62.74	-13
11280	-60.58	2.07	-58.51	-13
13160	-63.67	2.26	-61.41	-13
15040	-60.95	2.64	-58.31	-13
16920	-60.82	3.5	-57.32	-13
18800	-59.99	3.7	-56.29	-13







Frequency	
Auto Tune	
Center Freq	12.500000000 GHz
Start Freq	10.000000000 GHz
Stop Freq	15.000000000 GHz
CF Step	500.0000000 MHz
Auto	Man
Freq Offset	0 Hz

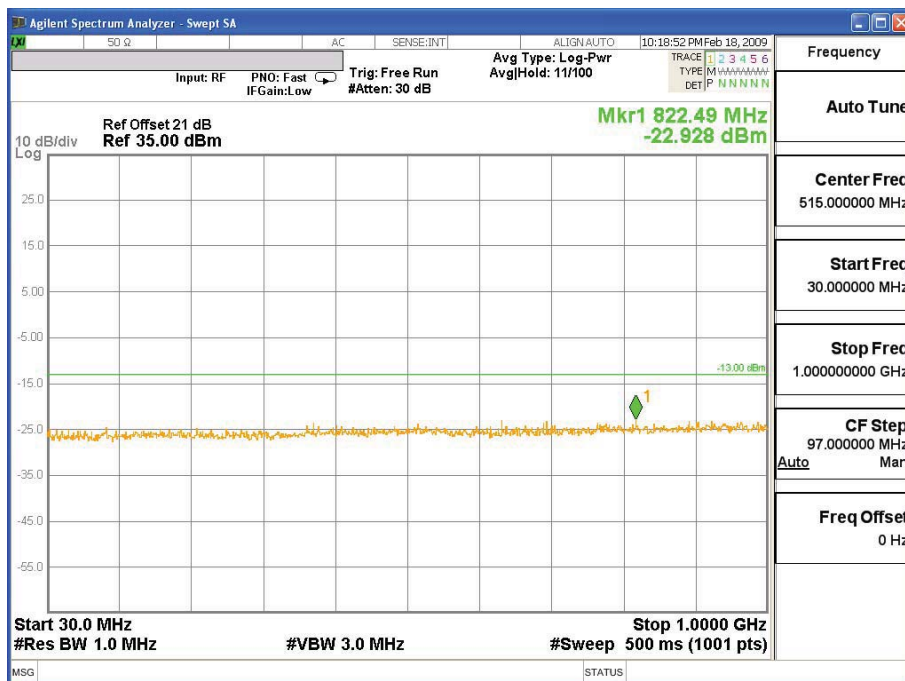


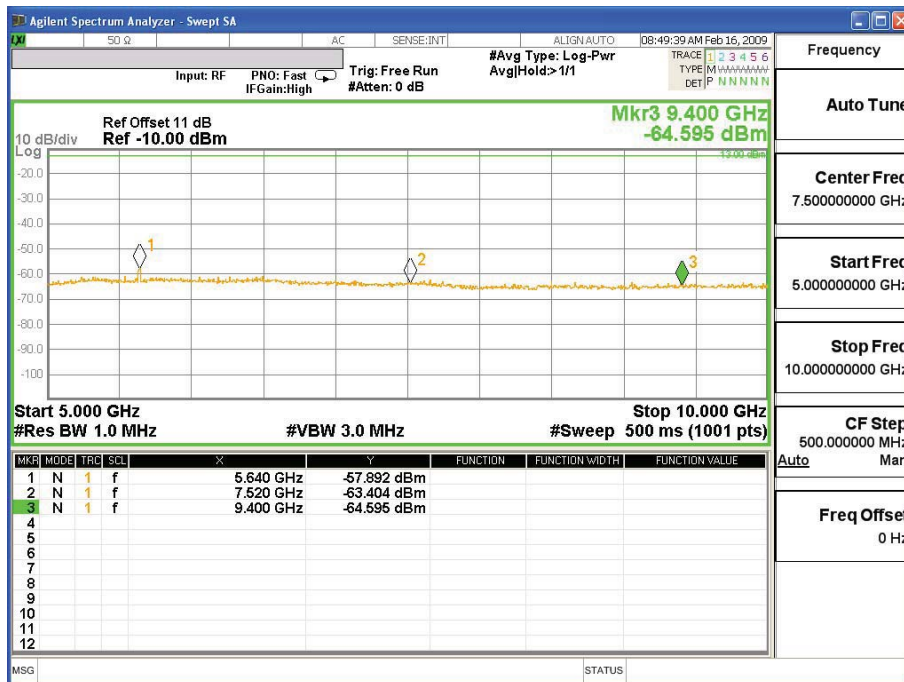
Frequency	
Auto Tune	
Center Freq	17.500000000 GHz
Start Freq	15.000000000 GHz
Stop Freq	20.000000000 GHz
CF Step	500.0000000 MHz
Auto	Man
Freq Offset	0 Hz

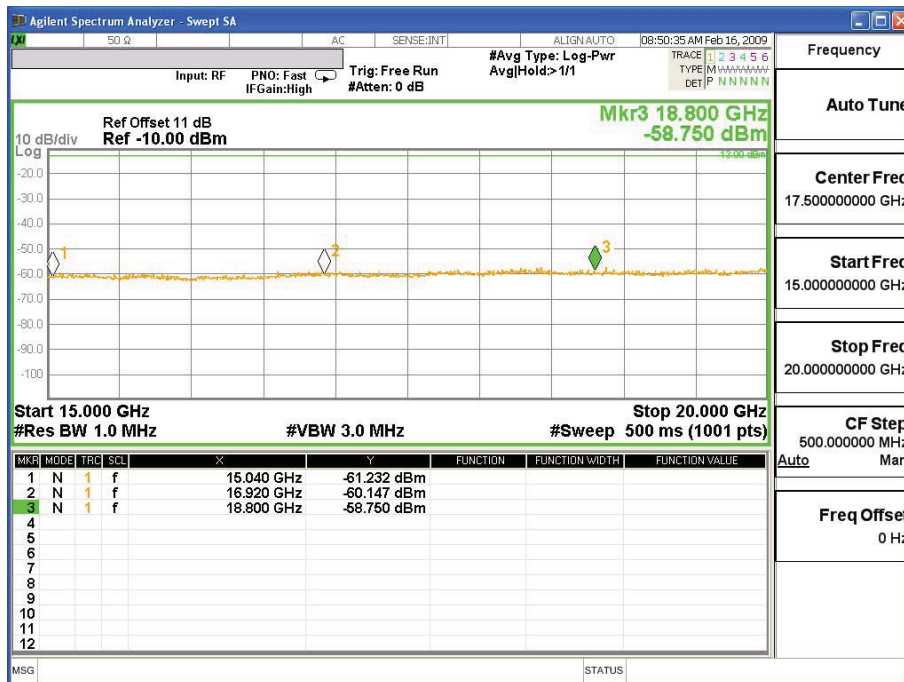
Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA	Test Range	30MHz~20GHz

WCDMA BAND II HSUPA Mid-Channel 9400

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-50.25	1.1	-49.15	-13
5640	-57.89	1.23	-56.66	-13
7520	-63.40	1.59	-61.81	-13
9400	-64.60	1.89	-62.71	-13
11280	-62.44	2.07	-60.37	-13
13160	-61.65	2.26	-59.39	-13
15040	-61.23	2.64	-58.59	-13
16920	-60.15	3.5	-56.65	-13
18800	-58.75	3.7	-55.05	-13







Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 189 (GSM 850 GPRS)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-48	-48.44	1.41	9.8	-40.05	-13
2509.2	-54.79	-53.98	1.56	10.6	-44.94	-13
3345.6	-57.7	-57.48	2.01	12.3	-47.19	-13
4182	-56.98	-52.78	2.74	12.6	-42.92	-13
5018.4	-60.94	-56.65	2.64	12.7	-46.59	-13
5854.8	-56.56	-47.21	2.36	13	-36.57	-13
6691.2	-61.88	-55.62	3.16	12.1	-46.68	-13
7527.6	-62.65	-53.22	3.3	11.5	-45.02	-13
8364	-61.82	-51.21	3.16	11.5	-42.87	-13

Vertical Emissions

1672.8	-44.82	-44.91	1.41	9.8	-36.52	-13
2509.2	-59.9	-61.69	1.56	10.6	-52.65	-13
3345.6	-55.81	-54.62	2.01	12.3	-44.33	-13
4182	-58.48	-55.91	2.74	12.6	-46.05	-13
5018.4	-54.01	-44.93	2.64	12.7	-34.87	-13
5854.8	-59.36	-52.18	2.36	13	-41.54	-13
6691.2	-55.85	-44.75	3.16	12.1	-35.81	-13
7527.6	-55.29	-39.52	3.3	11.5	-31.32	-13
8364	-57.75	-44.81	3.16	11.5	-36.47	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 661 (PCS1900 GPRS)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-54.610	-56.260	1.41	12.6	-45.070	-13
5640	-51.640	-48.634	1.56	13.1	-37.094	-13
7520	-51.440	-42.080	2.01	11.5	-32.590	-13
9400	-61.020	-46.103	2.74	12	-36.843	-13
11280	-64.880	-51.682	2.64	12	-42.322	-13
13160	-63.240	-50.758	2.36	13.3	-39.818	-13

Vertical Emissions

3760	-48.470	-50.402	1.41	12.6	-39.212	-13
5640	-47.050	-44.470	1.56	13.1	-32.930	-13
7520	-50.810	-41.754	2.01	11.5	-32.264	-13
9400	-61.270	-46.378	2.74	12	-37.118	-13
11280	-63.580	-50.848	2.64	12	-41.488	-13
13160	-63.760	-51.576	2.36	13.3	-40.636	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 189 (GSM 850 EGPRS)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-52.9	-55.49	1.41	9.8	-47.10	-13
2509.2	-59.57	-61.73	1.56	10.6	-52.69	-13
3345.6	-59.6	-60.61	2.01	12.3	-50.32	-13
4182	-60.8	-60.16	2.74	12.6	-50.30	-13
5018.4	-61.39	-57.50	2.64	12.7	-47.44	-13
5854.8	-60.72	-55.16	2.36	13	-44.52	-13
6691.2	-60.86	-53.43	3.16	12.1	-44.49	-13
7527.6	-62.44	-52.76	3.3	11.5	-44.56	-13
8364	-60.28	-48.44	3.16	11.5	-40.10	-13

Vertical Emissions

1672.8	-47.9	-48.72	1.41	9.8	-40.33	-13
2509.2	-60.14	-61.94	1.56	10.6	-52.90	-13
3345.6	-57.91	-58.36	2.01	12.3	-48.07	-13
4182	-59.38	-57.61	2.74	12.6	-47.75	-13
5018.4	-57.63	-50.04	2.64	12.7	-39.98	-13
5854.8	-60.29	-53.76	2.36	13	-43.12	-13
6691.2	-59.42	-50.00	3.16	12.1	-41.06	-13
7527.6	-58.98	-46.84	3.3	11.5	-38.64	-13
8364	-57.56	-44.52	3.16	11.5	-36.18	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 661 (PCS1900 EGPRS)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-56.940	-58.872	1.41	9.8	-47.682	-13
5640	-53.420	-50.840	1.56	10.6	-39.300	-13
7520	-56.270	-47.214	2.01	12.3	-37.724	-13
9400	-61.490	-46.598	2.74	12.6	-37.338	-13
11280	-62.730	-49.998	2.64	12.7	-40.638	-13

Vertical Emissions

3760	-48.690	-50.622	1.41	9.8	-39.432	-13
5640	-47.960	-45.380	1.56	10.6	-33.840	-13
7520	-57.300	-48.244	2.01	12.3	-38.754	-13
9400	-62.570	-47.678	2.74	12.6	-38.418	-13
11280	-63.870	-51.138	2.64	12.7	-41.778	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 4183 (WCDMA BAND V)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1762	-51.97	-54.06	1.41	9.8	-45.67	-13
2644	-57.84	-59.24	1.56	10.6	-50.20	-13
3345.6	-58.68	-59.23	2.01	12.3	-48.94	-13
4182	-59.00	-56.33	2.74	12.6	-46.47	-13
5018.4	-61.96	-58.58	2.64	12.7	-48.52	-13
5854.8	-61.44	-56.81	2.36	13	-46.17	-13
6691.2	-61.78	-55.29	3.16	12.1	-46.35	-13
7527.6	-63.20	-54.44	3.3	11.5	-46.24	-13
8364	-63.21	-53.44	3.16	11.5	-45.10	-13

Vertical Emissions

1763.2	-48.69	-49.70	1.41	9.8	-41.31	-13
2641.8	-55.95	-56.22	1.56	10.6	-47.18	-13
3346.4	-56.73	-56.20	2.01	12.3	-45.91	-13
4182	-59.65	-58.13	2.74	12.6	-48.27	-13
5018.4	-60.4	-55.77	2.64	12.7	-45.71	-13
5854.8	-60.3	-53.78	2.36	13	-43.14	-13
6691.2	-61.6	-59.26	3.16	12.1	-50.32	-13
7527.6	-63.17	-60.77	3.3	11.5	-52.57	-13
8364	-62.79	-57.14	3.16	11.5	-48.80	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 4183 (WCDMA BAND V HSDPA)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1763.2	-50.62	-52.03	1.41	9.8	-43.64	-13
2641.8	-46.25	-42.73	1.56	10.6	-33.69	-13
3346.4	-59.97	-61.08	2.01	12.3	-50.79	-13
4182	-59.3	-56.98	2.74	12.6	-47.12	-13
5018.4	-61.01	-56.78	2.64	12.7	-46.72	-13
5854.8	-61.52	-57.00	2.36	13	-46.36	-13
6691.2	-60.97	-53.64	3.16	12.1	-44.70	-13
7527.6	-62.73	-53.40	3.3	11.5	-45.20	-13
8364	-62.42	-52.17	3.16	11.5	-43.83	-13

Vertical Emissions

1763.2	-34.56	-33.62	1.41	9.8	-25.23	-13
2644	-35.57	-31.23	1.56	10.6	-22.19	-13
3526	-55.54	-54.23	2.01	12.3	-43.94	-13
4182	-60.2	-59.17	2.74	12.6	-49.31	-13
5018.4	-60.94	-57.05	2.64	12.7	-46.99	-13
5854.8	-60.59	-54.27	2.36	13	-43.63	-13
6691.2	-61.56	-59.12	3.16	12.1	-50.18	-13
7527.6	-63.07	-60.52	3.3	11.5	-52.32	-13
8364	-62.98	-57.65	3.16	11.5	-49.31	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 4183 (WCDMA BAND V HSUPA)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1763.2	-45.42	-45.29	1.41	9.8	-36.90	-13
2641.8	-41.42	-37.29	1.56	10.6	-28.25	-13
3346.4	-60.06	-61.19	2.01	12.3	-50.90	-13
4182	-60.4	-59.35	2.74	12.6	-49.49	-13
5018.4	-62.19	-59.02	2.64	12.7	-48.96	-13
5854.8	-61.63	-57.25	2.36	13	-46.61	-13
6691.2	-60.68	-53.09	3.16	12.1	-44.15	-13
7527.6	-62.72	-53.38	3.3	11.5	-45.18	-13
8364	-62.12	-51.69	3.16	11.5	-43.35	-13

Vertical Emissions

1763.2	-40.29	-39.67	1.41	9.8	-31.28	-13
2641.8	-32.36	-27.91	1.56	10.6	-18.87	-13
3526	-55.5	-54.17	2.01	12.3	-43.88	-13
4182	-59.51	-57.86	2.74	12.6	-48.00	-13
5018.4	-61.03	-57.26	2.64	12.7	-47.20	-13
5854.8	-59.91	-53.12	2.36	13	-42.48	-13
6691.2	-61.2	-57.83	3.16	12.1	-48.89	-13
7527.6	-62.13	-54.59	3.3	11.5	-46.39	-13
8364	-62.7	-56.90	3.16	11.5	-48.56	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 9400 (WCDMA BAND II)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-56.750	-58.400	1.41	12.6	-47.210	-13
5640	-62.250	-59.244	1.56	13.1	-47.704	-13
7520	-62.650	-53.290	2.01	11.5	-43.800	-13
9400	-64.010	-49.093	2.74	12	-39.833	-13
11280	-63.710	-50.512	2.64	12	-41.152	-13

Vertical Emissions

3760	-51.660	-53.592	1.41	12.6	-42.402	-13
5640	-61.680	-59.100	1.56	13.1	-47.560	-13
7520	-60.420	-51.364	2.01	11.5	-41.874	-13
9400	-59.870	-44.978	2.74	12	-35.718	-13
11280	-61.410	-48.678	2.64	12	-39.318	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 9400 (WCDMA BAND II HSDPA)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-55.930	-57.580	1.41	12.6	-46.390	-13
5640	-62.460	-59.454	1.56	13.1	-47.914	-13
7520	-63.260	-53.900	2.01	11.5	-44.410	-13
9400	-63.600	-48.683	2.74	12	-39.423	-13
11280	-64.050	-50.852	2.64	12	-41.492	-13

Vertical Emissions

3760	-52.130	-54.062	1.41	12.6	-42.872	-13
5640	-61.210	-58.630	1.56	13.1	-47.090	-13
7520	-61.310	-52.254	2.01	11.5	-42.764	-13
9400	-59.910	-45.018	2.74	12	-35.758	-13
11280	-62.420	-49.688	2.64	12	-40.328	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/18	Test Site	OATS 3
Test Condition	Channel 9400 (WCDMA BAND II HSUPA)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-56.200	-57.850	1.41	12.6	-46.660	-13
5640	-62.620	-59.614	1.56	13.1	-48.074	-13
7520	-62.620	-53.260	2.01	11.5	-43.770	-13
9400	-64.170	-49.253	2.74	12	-39.993	-13
11280	-62.940	-49.742	2.64	12	-40.382	-13

Vertical Emissions

3760	-51.950	-53.882	1.41	12.6	-42.692	-13
5640	-62.090	-59.510	1.56	13.1	-47.970	-13
7520	-60.760	-51.704	2.01	11.5	-42.214	-13
9400	-60.080	-45.188	2.74	12	-35.928	-13
11280	-58.900	-46.168	2.64	12	-36.808	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

6. Frequency Stability Under Temperature & Voltage Variations

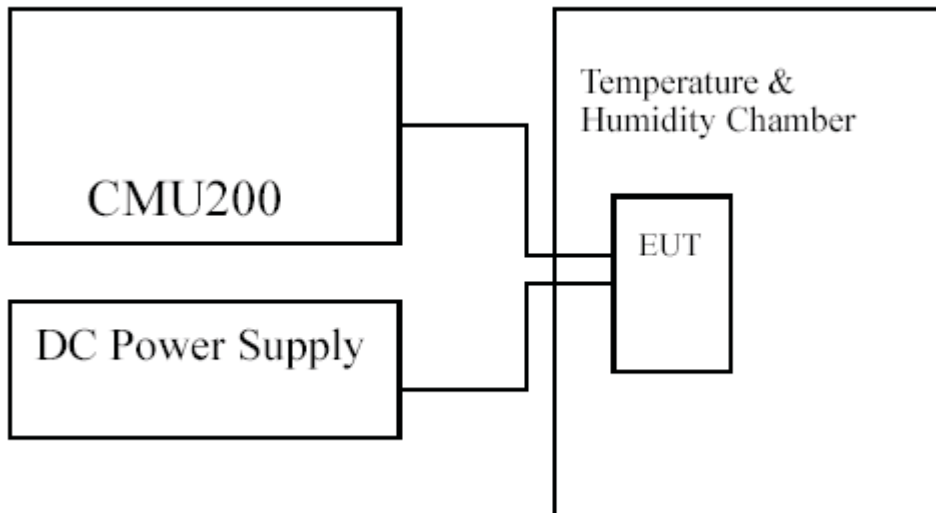
6.1. Test Equipment

The following test equipments are used during the frequency stability test:

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Universal Radio Communication Tester	R & S	CMU200 / 104846	Apr., 2008
Standard Temperature & Humidity Chamber	WIT	TH-1S-B / 108210	Aug., 2008
DC Power Supply	Topward	6303D / 670302	N/A

Note: All equipments upon which need to be calibrated are with calibration period of 1 year

6.2. Test Setup



6.3. Limits

Limit	$\pm 2.5\text{ppm}$
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6.4. Test Procedure

The frequency stability of transmitter is measured by:

- (a) Temperature: The temperature is varied from -30°C to 50°C in 10°C increment using a standard temperature & Humidity chamber.
- (b) Primary Supply Voltage: The primary supply voltage is varied 85% to 115% of the nominal value for non hand-carried equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating endpoint which shall be specified by the manufacturer.

The EUT was connected via the base station simulator. Universal Radio Communication Tester, (CMU200), was used to measure The Frequency Error. The maximum result of measurements was recorded.

6.5. Test Specification

According to Part 2.1055,22.355,24.235

6.6. Test Result of Frequency Stability Under Temperature Variations

Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	GSM 850 GPRS / Channel 189	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	-44	±2.09
-20	0.836	-37	±2.09
-10	0.836	24	±2.09
0	0.836	28	±2.09
10	0.836	-29	±2.09
20	0.836	-33	±2.09
30	0.836	-32	±2.09
40	0.836	-36	±2.09
50	0.836	-39	±2.09

Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	PCS 1900 GPRS / Channel 661	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	-82	±4.7
-20	1.88	-74	±4.7
-10	1.88	-31	±4.7
0	1.88	-62	±4.7
10	1.88	-32	±4.7
20	1.88	-58	±4.7
30	1.88	-43	±4.7
40	1.88	-84	±4.7
50	1.88	-43	±4.7

Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	GSM 850 EGPRS / Channel 189	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	-44	±2.09
-20	0.836	46	±2.09
-10	0.836	48	±2.09
0	0.836	-35	±2.09
10	0.836	-52	±2.09
20	0.836	-24	±2.09
30	0.836	-37	±2.09
40	0.836	-29	±2.09
50	0.836	-35	±2.09

.Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	PCS 1900 EGPRS / Channel 661	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	-64	±4.7
-20	1.88	-61	±4.7
-10	1.88	32	±4.7
0	1.88	-73	±4.7
10	1.88	-59	±4.7
20	1.88	-67	±4.7
30	1.88	-62	±4.7
40	1.88	-67	±4.7
50	1.88	-81	±4.7

Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND V / Channel 4183	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	18	±2.09
-20	0.836	20	±2.09
-10	0.836	-16	±2.09
0	0.836	-19	±2.09
10	0.836	-23	±2.09
20	0.836	-16	±2.09
30	0.836	14	±2.09
40	0.836	-13	±2.09
50	0.836	-13	±2.09

.Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA / Channel 4183	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	17	±2.09
-20	0.836	25	±2.09
-10	0.836	28	±2.09
0	0.836	-19	±2.09
10	0.836	-27	±2.09
20	0.836	-20	±2.09
30	0.836	-17	±2.09
40	0.836	-27	±2.09
50	0.836	-19	±2.09

.Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA / Channel 4183	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	17	±2.09
-20	0.836	26	±2.09
-10	0.836	31	±2.09
0	0.836	22	±2.09
10	0.836	20	±2.09
20	0.836	-24	±2.09
30	0.836	-22	±2.09
40	0.836	-17	±2.09
50	0.836	19	±2.09

Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND II / Channel 9400	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	-46	±4.7
-20	1.88	26	±4.7
-10	1.88	-46	±4.7
0	1.88	-33	±4.7
10	1.88	-26	±4.7
20	1.88	28	±4.7
30	1.88	-41	±4.7
40	1.88	-30	±4.7
50	1.88	29	±4.7

Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA / Channel 9400	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	-26	±4.7
-20	1.88	-29	±4.7
-10	1.88	-40	±4.7
0	1.88	-34	±4.7
10	1.88	-40	±4.7
20	1.88	-27	±4.7
30	1.88	34	±4.7
40	1.88	-26	±4.7
50	1.88	29	±4.7

.Product	HSUPA PCI Express mini card module		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA / Channel 9400	Test Range	-30°C ~+50°C

Temperature Interval(°C)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	-31	±4.7
-20	1.88	-29	±4.7
-10	1.88	-32	±4.7
0	1.88	38	±4.7
10	1.88	-35	±4.7
20	1.88	33	±4.7
30	1.88	-44	±4.7
40	1.88	-35	±4.7
50	1.88	28	±4.7

7. EMI Reduction Method During Compliance Testing

No modification was made during testing.