
5.4. Test Procedure

In accordance with Part 2.1051, the spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using a combination of filters and attenuators and the frequency spectrum investigated from 30MHz to 20GHz. The EUT was set to transmit on full power. The EUT was tested on bottom, middle and top channels for both power levels. The resolution and video bandwidth was set to 1MHz in accordance with Part 24.238. The spectrum analyzer detector was set to Max Hold.

In addition, measurements were made up to the 10th harmonic of the fundamental.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to TIA/EIA 603-C on radiated measurement.

5.5. Test Specification

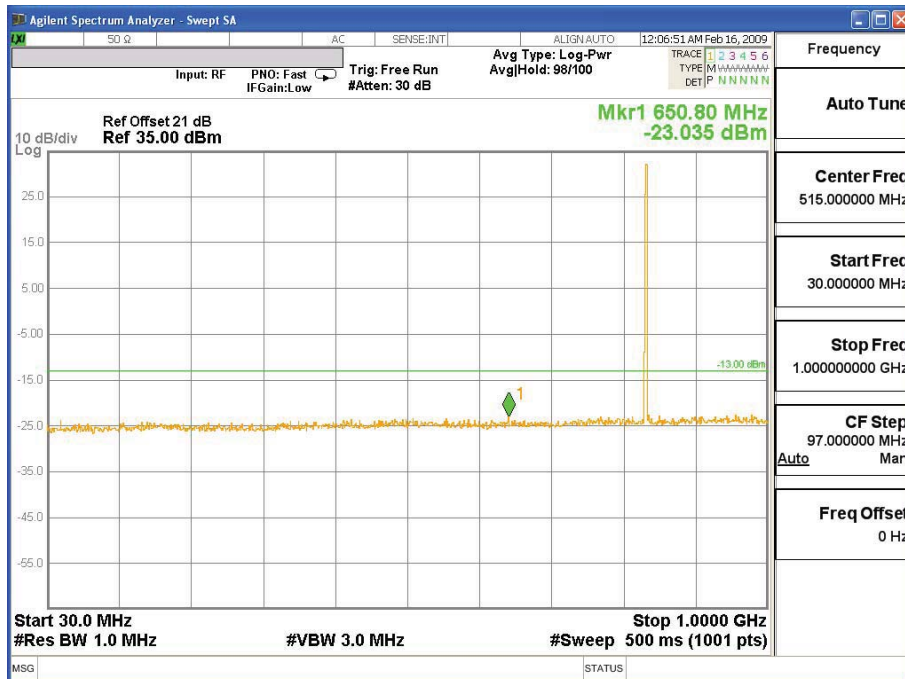
According to Part 2.1051, 2.1053, 22.917(a), 24.238(b).

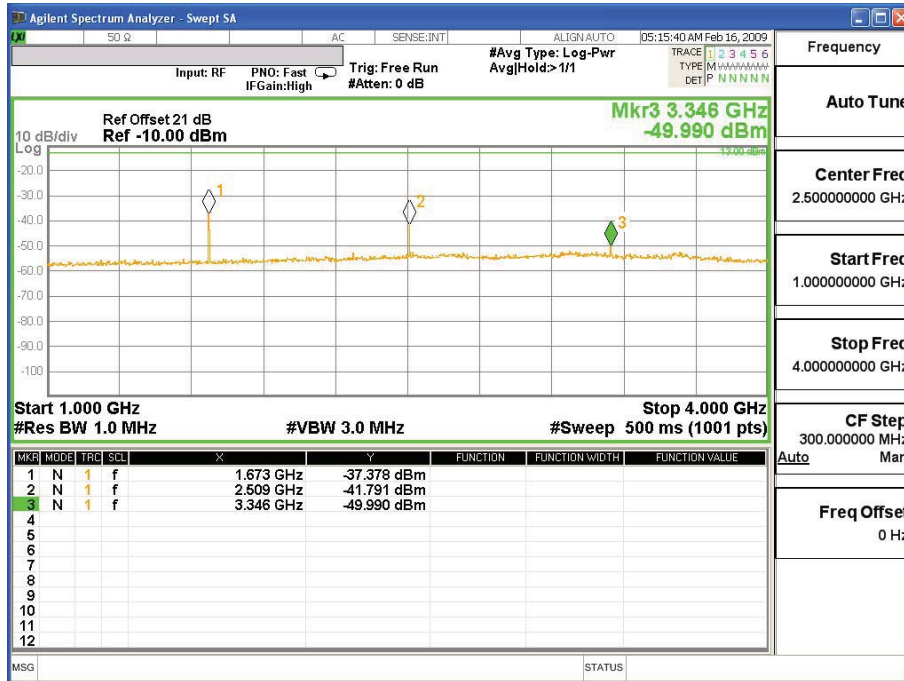
5.6. Test Result of Spurious Emission

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	GSM 850 GPRS	Test Range	30MHz~10GHz

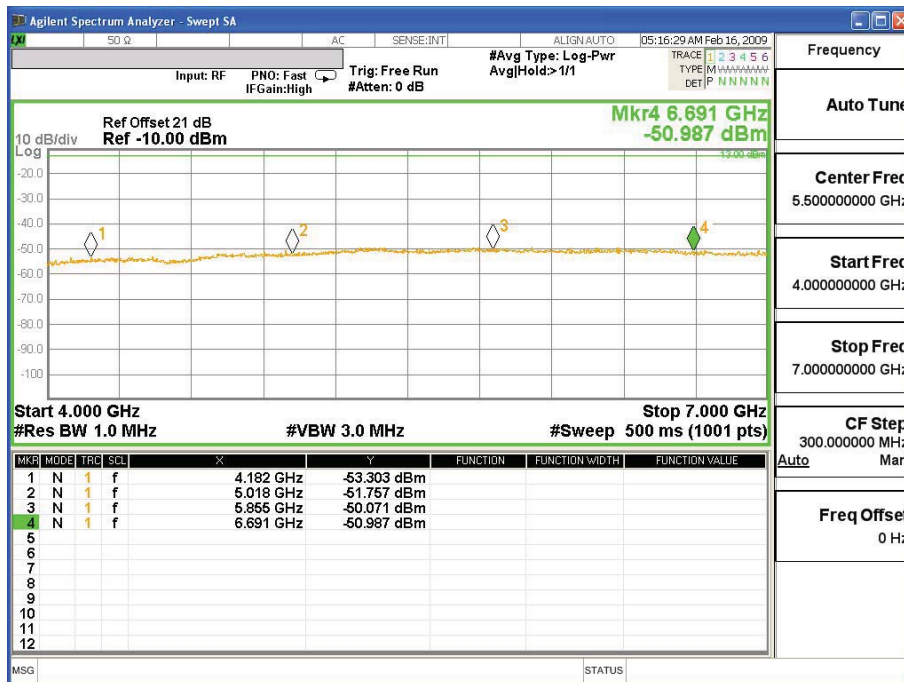
GSM 850 GPRS Middle-Channel 189

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1670	-37.38	0.58	-36.80	-13
2509.2	-41.79	0.7	-41.09	-13
3345.6	-49.99	1.01	-48.98	-13
4182	-53.30	1.18	-52.12	-13
5018.4	-51.76	1.23	-50.53	-13
5854.8	-50.07	1.45	-48.62	-13
6691.2	-50.99	1.56	-49.43	-13
7527.6	-52.53	1.59	-50.94	-13
8364	-54.72	1.82	-52.90	-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



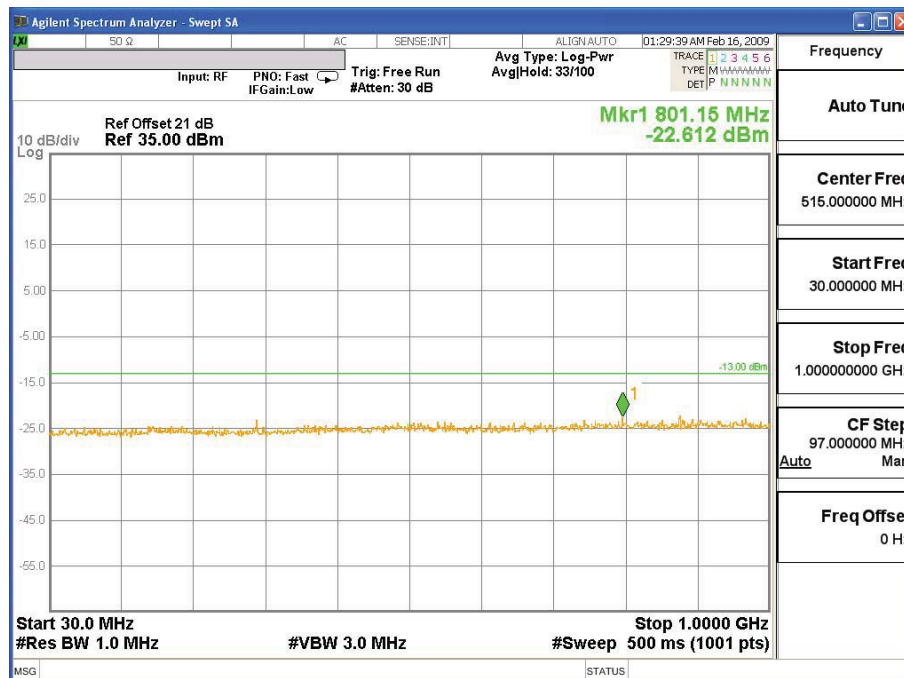
Frequency
Auto Tune
Center Freq 5.500000000 GHz
Start Freq 4.000000000 GHz
Stop Freq 7.000000000 GHz
CF Step 300.0000000 MHz
Auto Man
Freq Offset 0 Hz



Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	PCS 1900 GPRS	Test Range	30MHz~20GHz

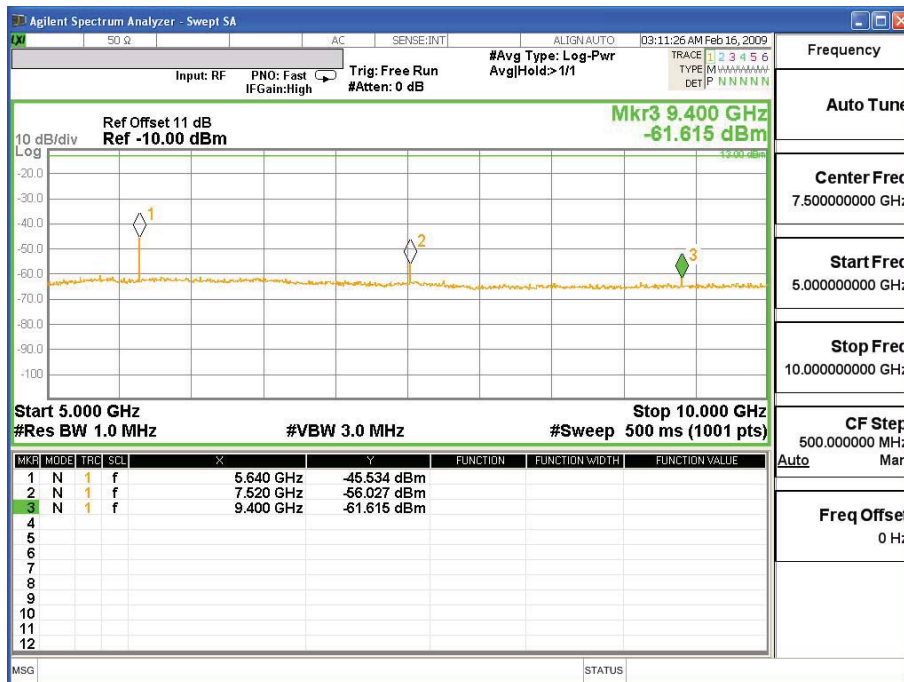
PCS 1900 GPRS Mid-Channel 661

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-53.50	1.1	-52.40	-13
5640	-45.53	1.23	-44.30	-13
7520	-56.03	1.59	-54.44	-13
9400	-61.62	1.89	-59.73	-13
11280	-51.99	2.07	-49.92	-13
13160	-58.23	2.26	-55.97	-13
15040	-61.47	2.64	-58.83	-13
16920	-60.62	3.5	-57.12	-13
18800	-59.72	3.7	-56.02	-13





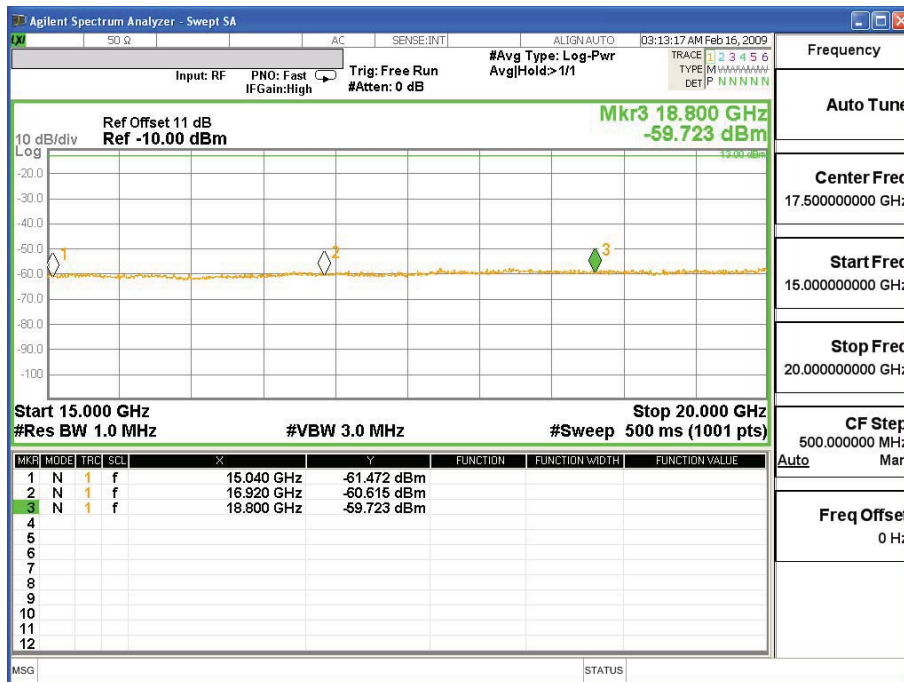
Frequency
Auto Tune
Center Freq 3.000000000 GHz
Start Freq 1.000000000 GHz
Stop Freq 5.000000000 GHz
CF Step 400.0000000 MHz
Auto Man
Freq Offset 0 Hz



Frequency
Auto Tune
Center Freq 7.500000000 GHz
Start Freq 5.000000000 GHz
Stop Freq 10.000000000 GHz
CF Step 500.0000000 MHz
Auto Man
Freq Offset 0 Hz



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

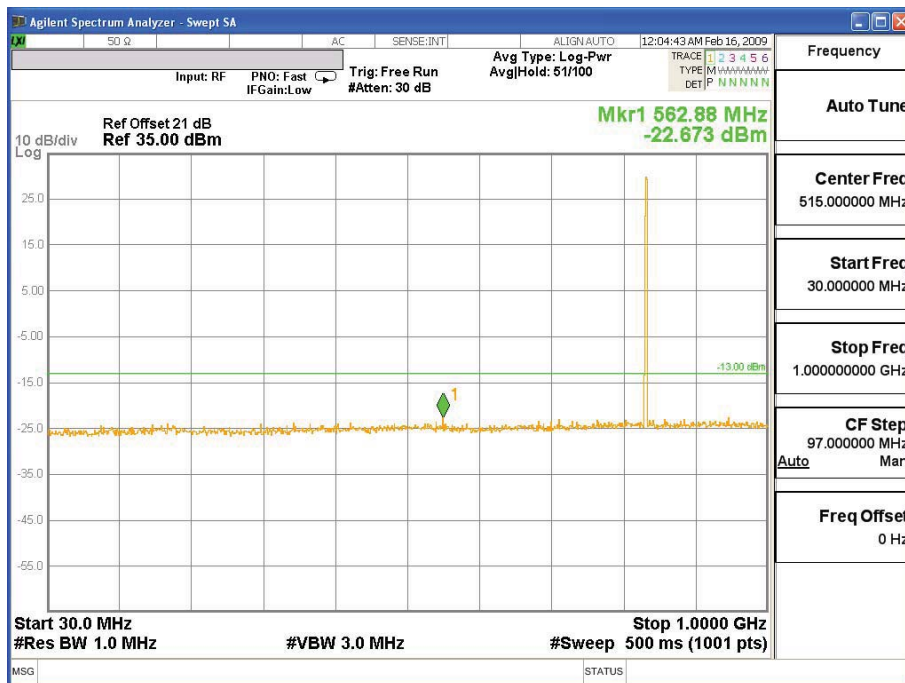


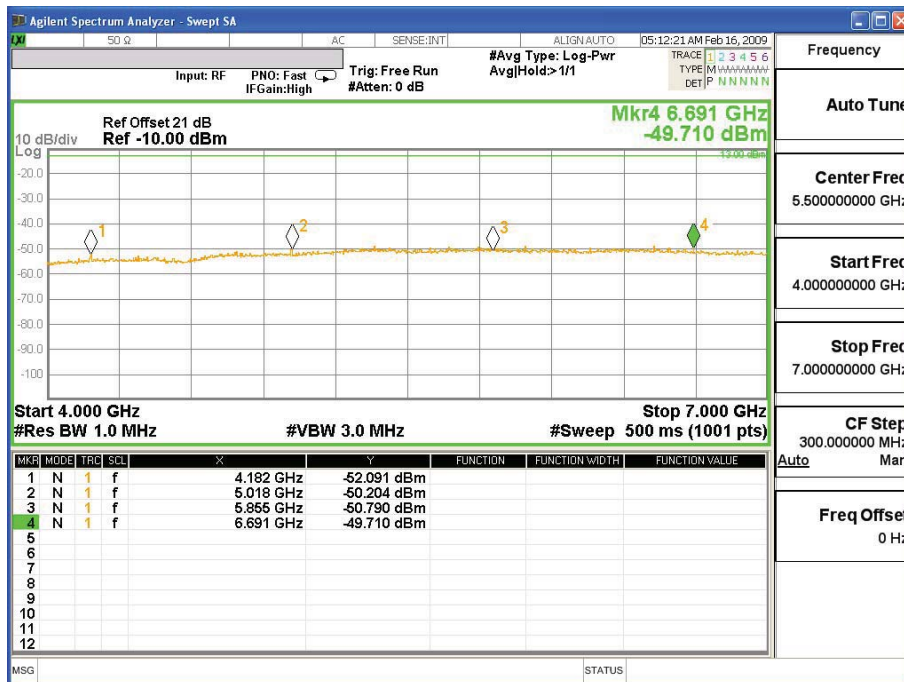
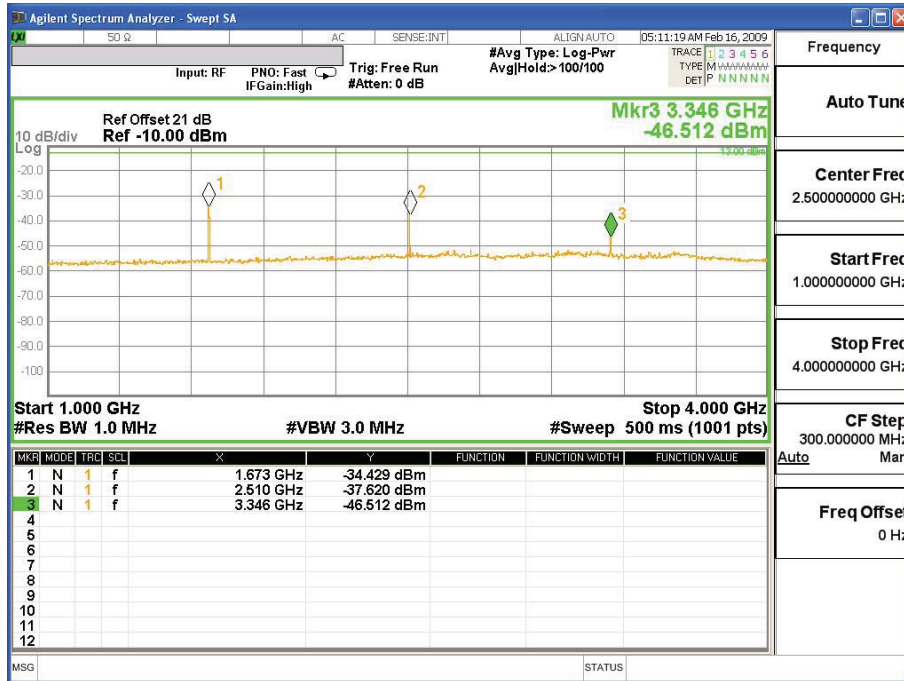
Frequency	Auto Tune
Center Freq	17.500000000 GHz
Start Freq	15.000000000 GHz
Stop Freq	20.000000000 GHz
CF Step	500.0000000 MHz
Auto	Man
Freq Offset	0 Hz

Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	GSM 850 EGPRS	Test Range	30MHz~10GHz

GSM 850 EGPRS Mid-Channel 189

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1670	-34.43	0.58	-33.85	-13
2509.2	-37.62	0.7	-36.92	-13
3345.6	-46.51	1.01	-45.50	-13
4182	-52.09	1.18	-50.91	-13
5018.4	-50.20	1.23	-48.97	-13
5854.8	-50.79	1.45	-49.34	-13
6691.2	-49.71	1.56	-48.15	-13
7527.6	-53.17	1.59	-51.58	-13
8364	-50.96	1.82	-49.14	-13



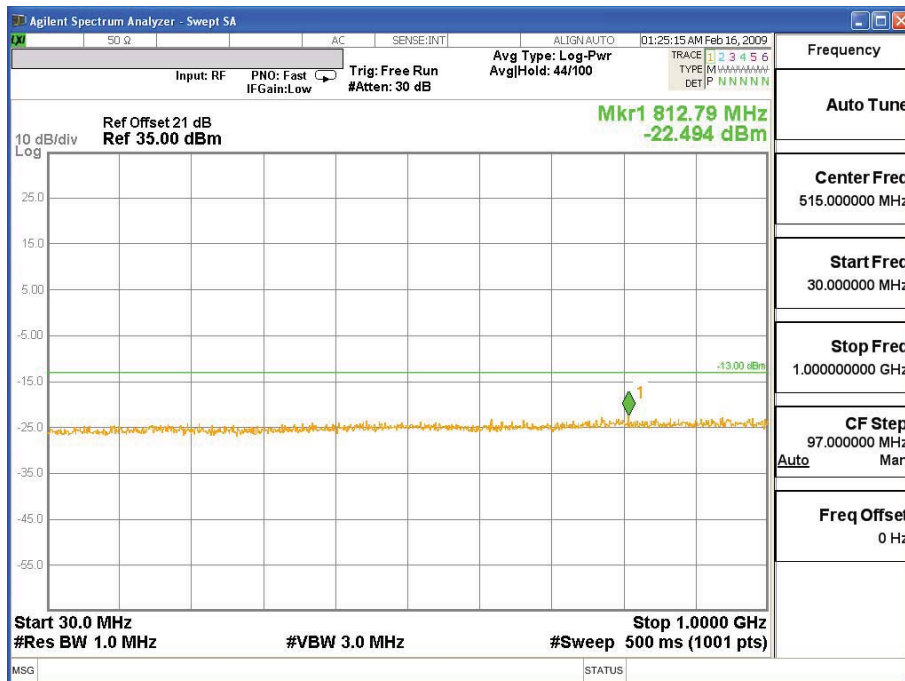




Product	HSUPA PCI Express mini card module		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/18	Test Site	CTR
Test Condition	PCS 1900 EGPRS	Test Range	30MHz~20GHz

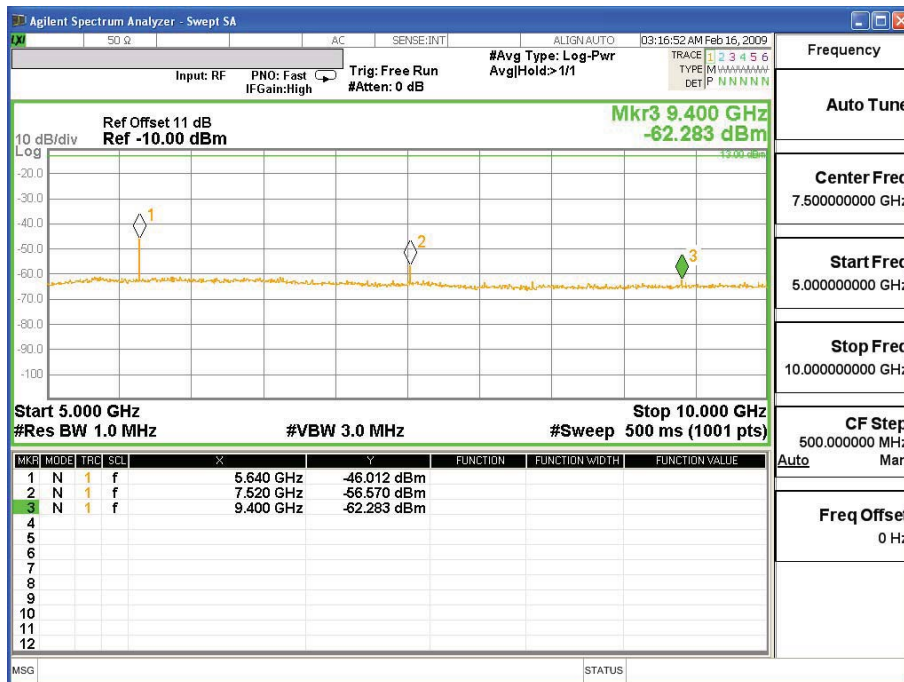
PCS 1900 EGPRS Mid-Channel 661

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-56.65	1.1	-55.55	-13
5640	-46.01	1.23	-44.78	-13
7520	-56.57	1.59	-54.98	-13
9400	-62.28	1.89	-60.39	-13
11280	-53.17	2.07	-51.10	-13
13160	-59.00	2.26	-56.74	-13
15040	-61.48	2.64	-58.84	-13
16920	-58.38	3.5	-54.88	-13
18800	-59.55	3.7	-55.85	-13





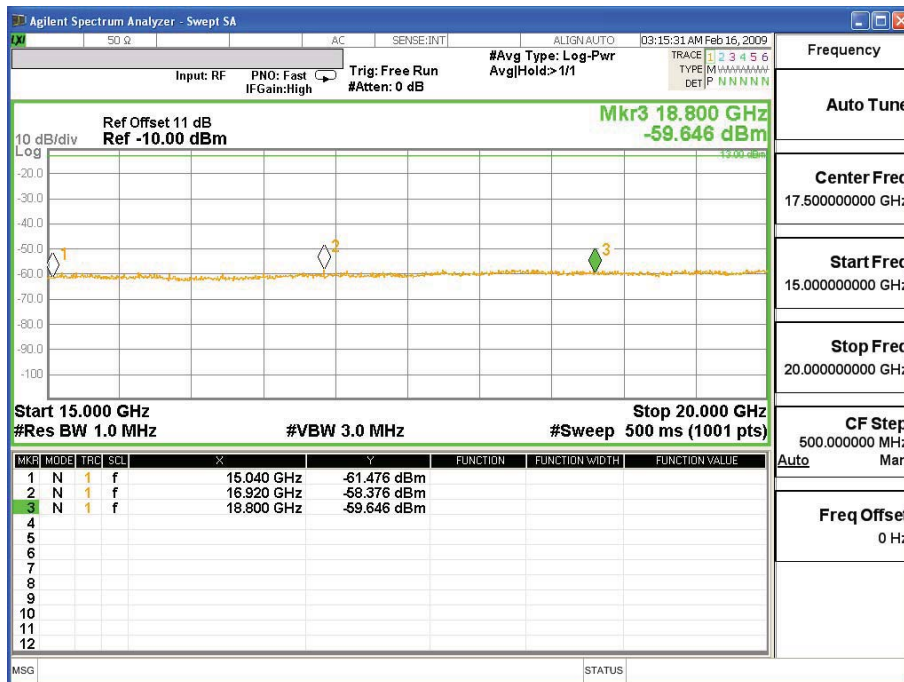
Frequency
Auto Tune
Center Freq 3.000000000 GHz
Start Freq 1.000000000 GHz
Stop Freq 5.000000000 GHz
CF Step 400.0000000 MHz
Auto Man
Freq Offset 0 Hz



Frequency
Auto Tune
Center Freq 7.500000000 GHz
Start Freq 5.000000000 GHz
Stop Freq 10.000000000 GHz
CF Step 500.0000000 MHz
Auto Man
Freq Offset 0 Hz



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

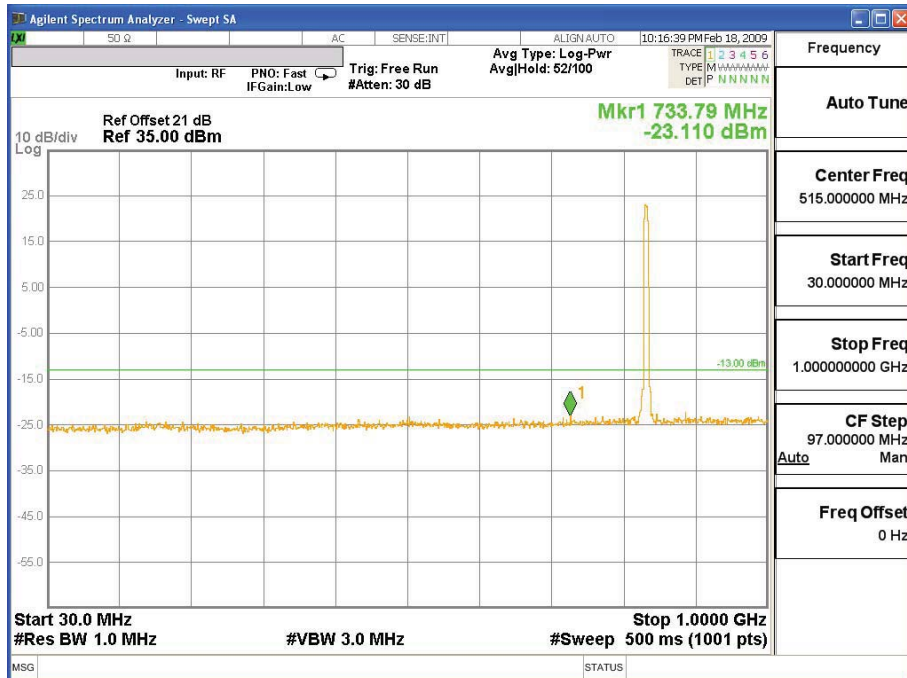


Frequency	
Auto Tune	
Center Freq	17.500000000 GHz
Start Freq	15.000000000 GHz
Stop Freq	20.000000000 GHz
CF Step	500.0000000 MHz
Auto	Man
Freq Offset	0 Hz

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 V	Test Range	30MHz~10GHz

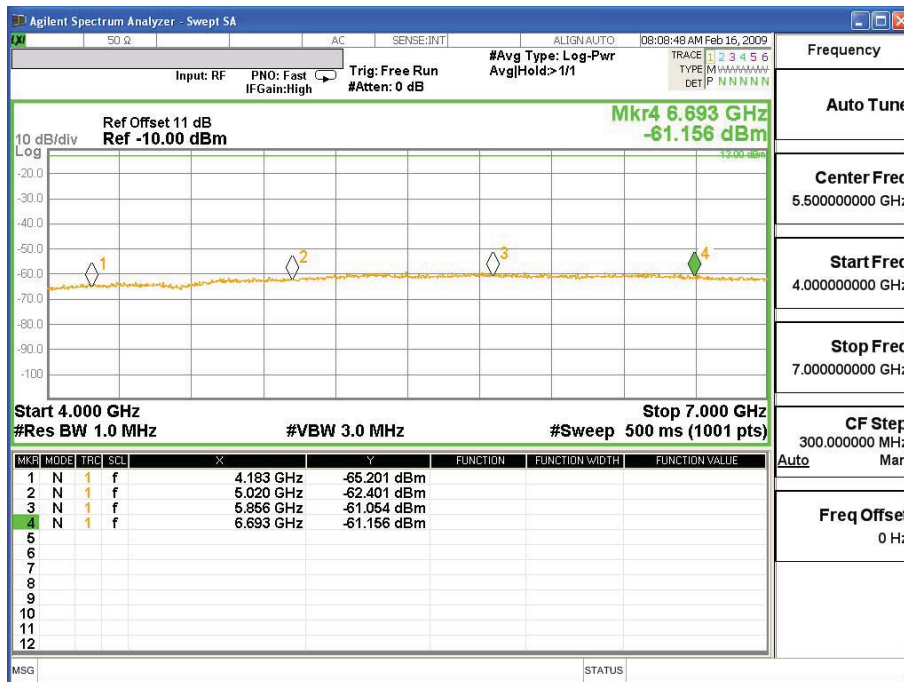
WCDMA BAND V Mid-Channel 4183

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1673.2	-60.65	0.58	-60.07	-13
2509.8	-62.44	0.7	-61.74	-13
3346.4	-54.34	1.01	-53.33	-13
4183	-65.20	1.18	-64.02	-13
5019.6	-62.40	1.23	-61.17	-13
5856.2	-61.05	1.45	-59.60	-13
6692.8	-61.16	1.56	-59.60	-13
7529.4	-63.45	1.59	-61.86	-13
8366	-65.68	1.82	-63.86	-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 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

