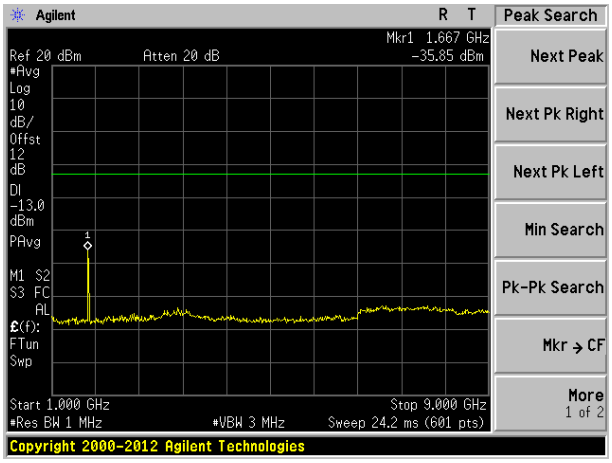
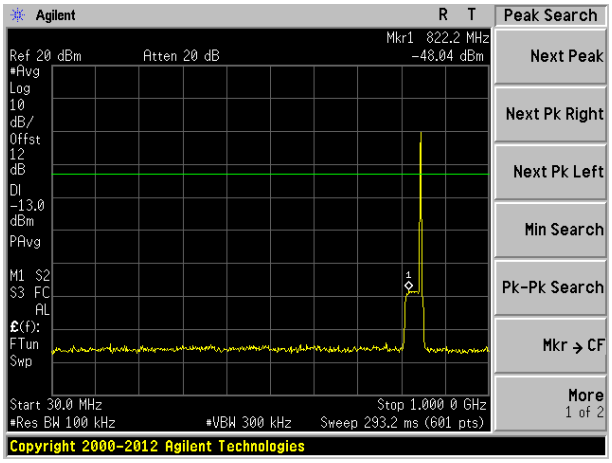
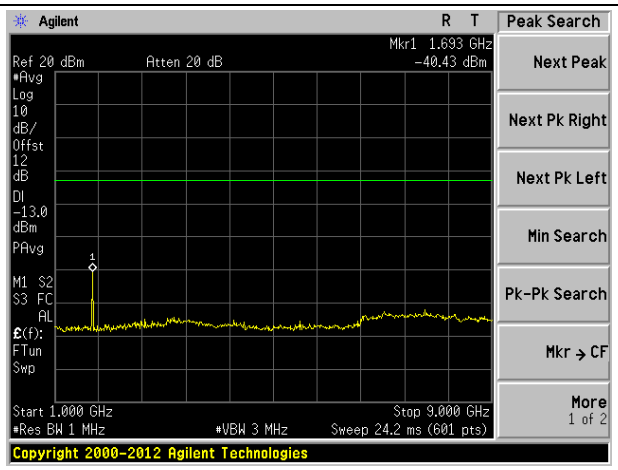
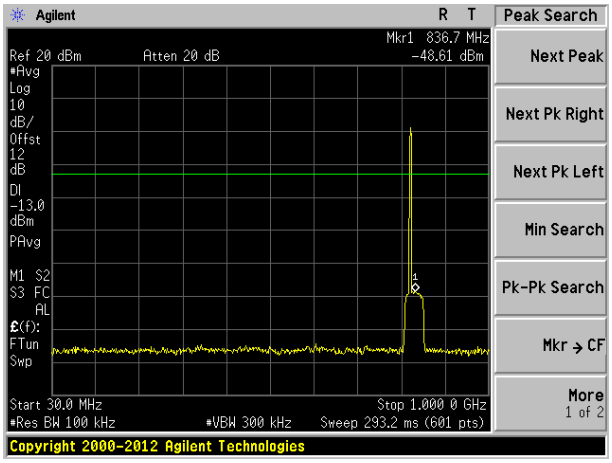
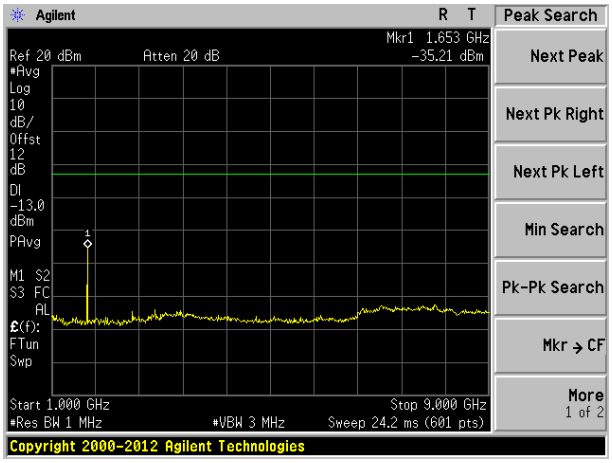
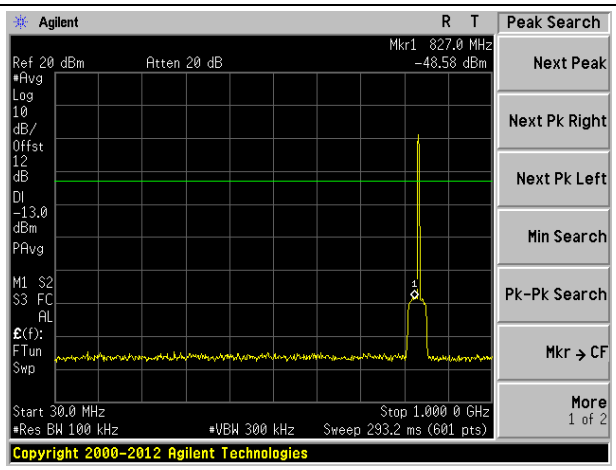
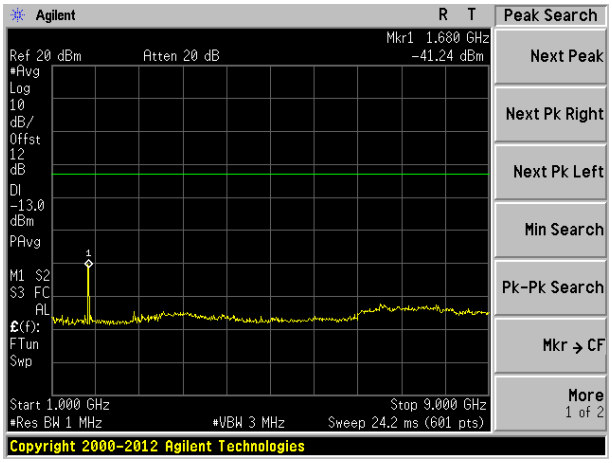
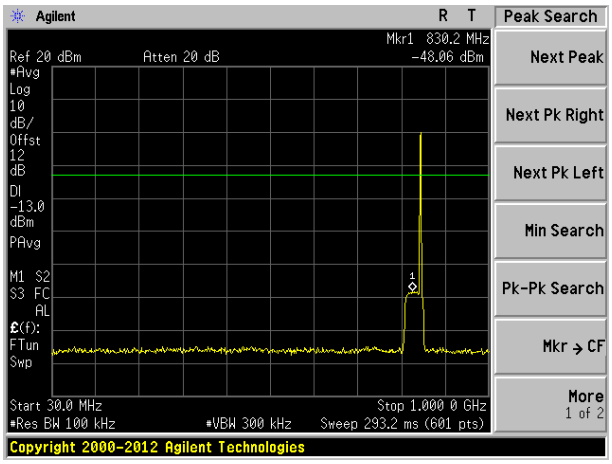
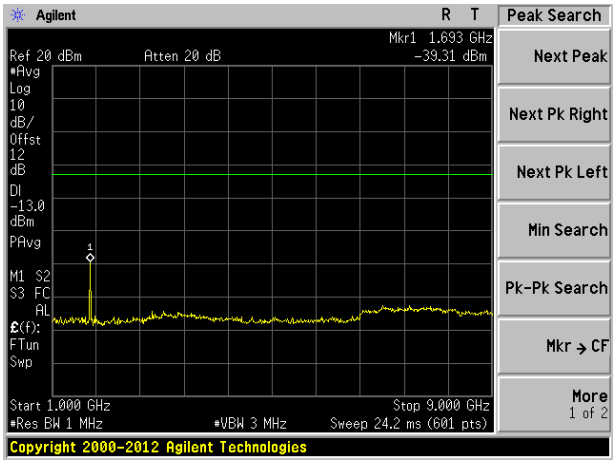
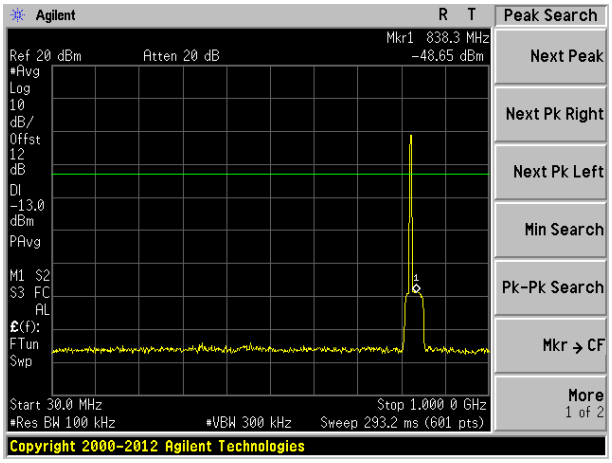
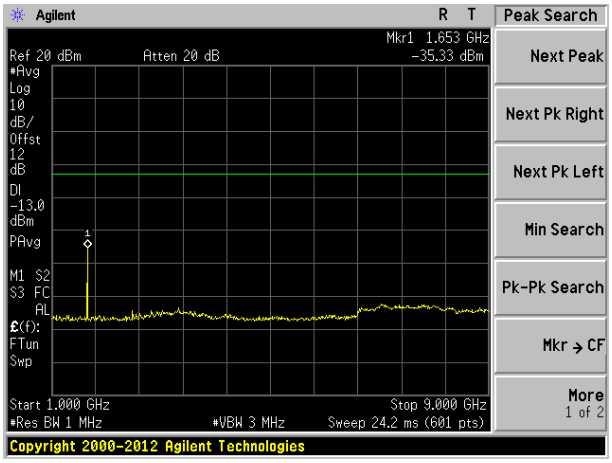
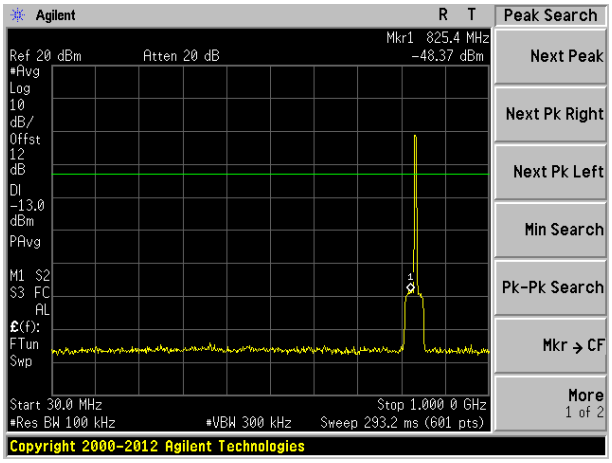
1000MHz-9000MHz

Highest channel
30MHz-1000MHz

1000MHz-9000MHz


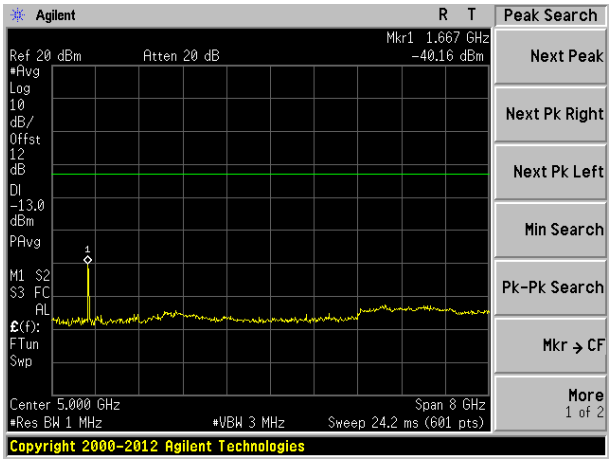
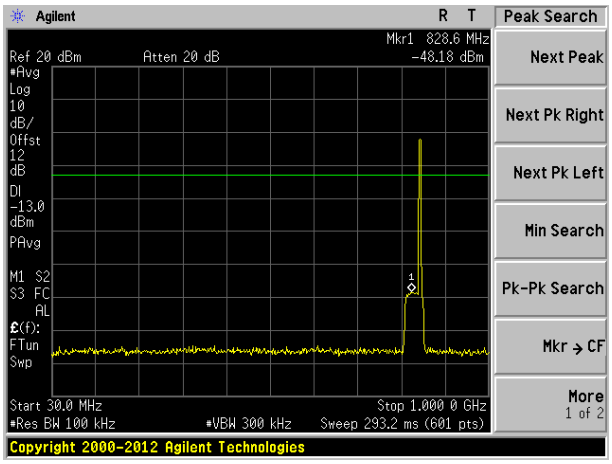
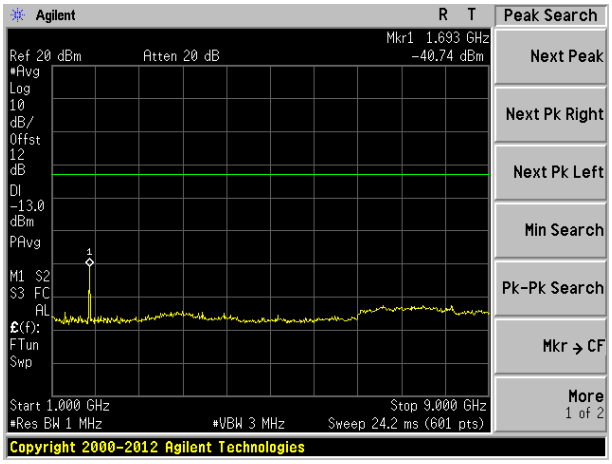
Spurious emission of LTE 3MHz Bandwidth

Lowest channel
30MHz-1000MHz

1000MHz-9000MHz

Middle channel
30MHz-1000MHz


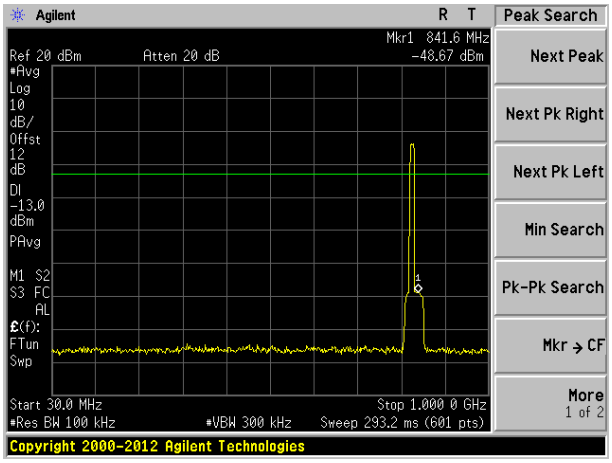
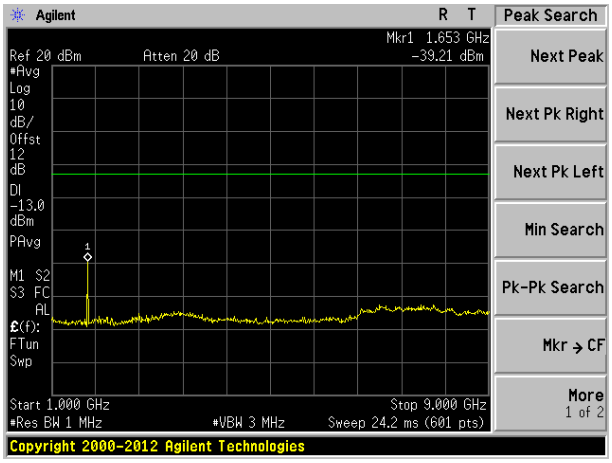
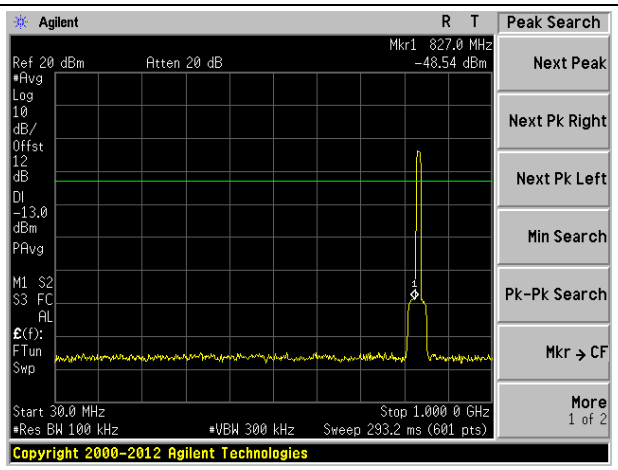
1000MHz-9000MHz

Highest channel
30MHz-1000MHz

1000MHz-9000MHz


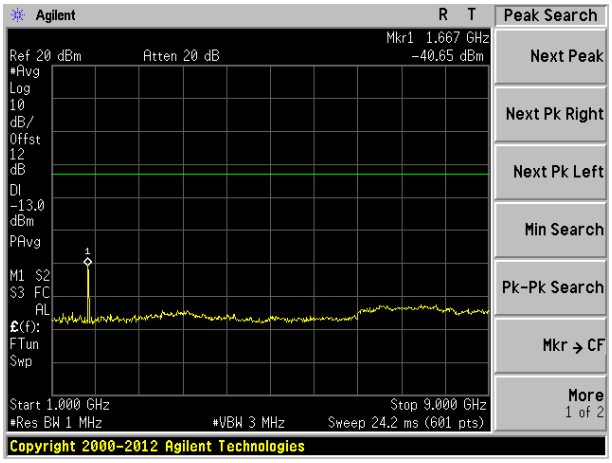
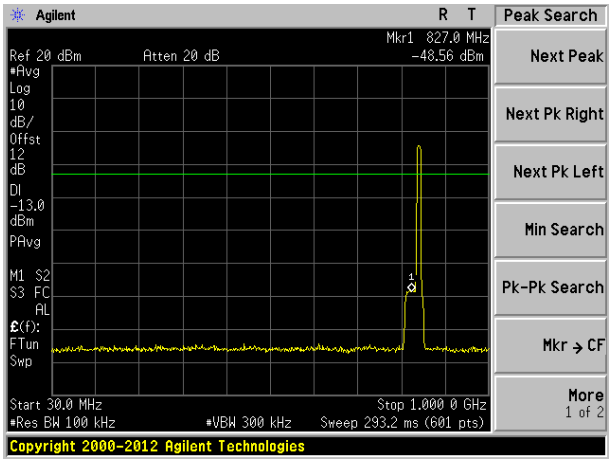
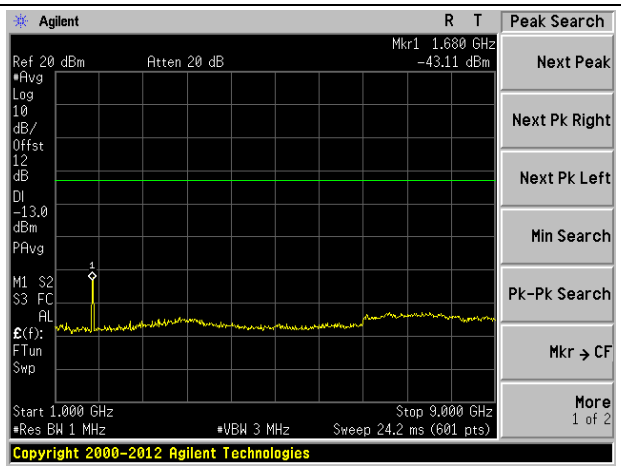
Spurious emission of LTE 5MHz Bandwidth

Lowest channel
30MHz-1000MHz

1000MHz-9000MHz

Middle channel
30MHz-1000MHz


1000MHz-9000MHz

Highest channel
30MHz-1000MHz

1000MHz-9000MHz


Spurious emission of LTE 10MHz Bandwidth

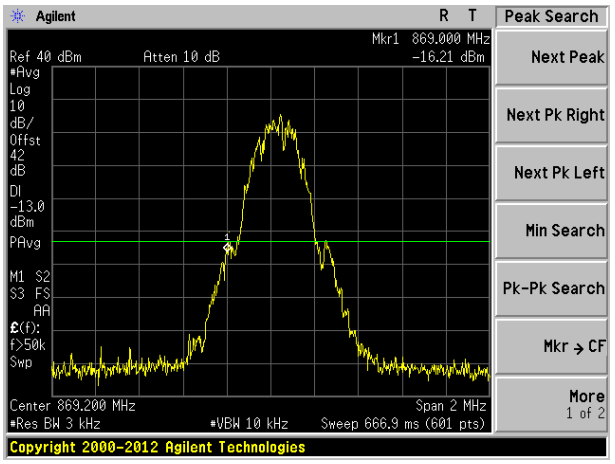
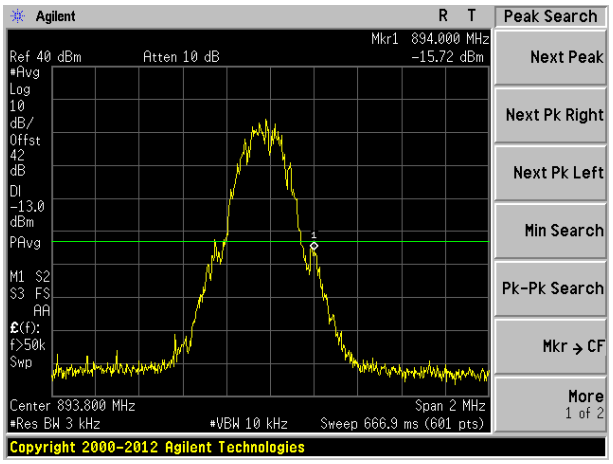
Lowest channel
30MHz-1000MHz

1000MHz-9000MHz

Middle channel
30MHz-1000MHz


1000MHz-9000MHz

Highest channel
30MHz-1000MHz

1000MHz-9000MHz


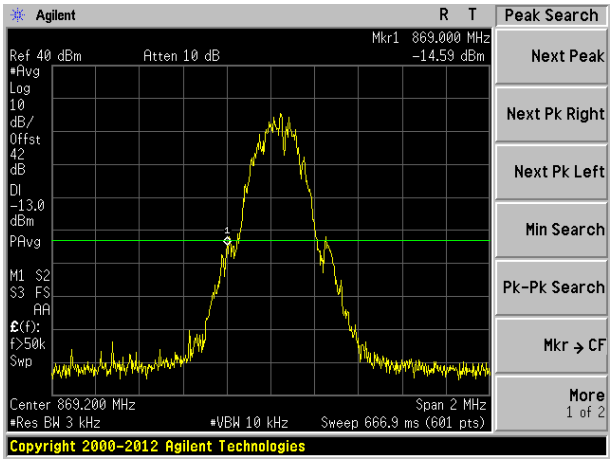
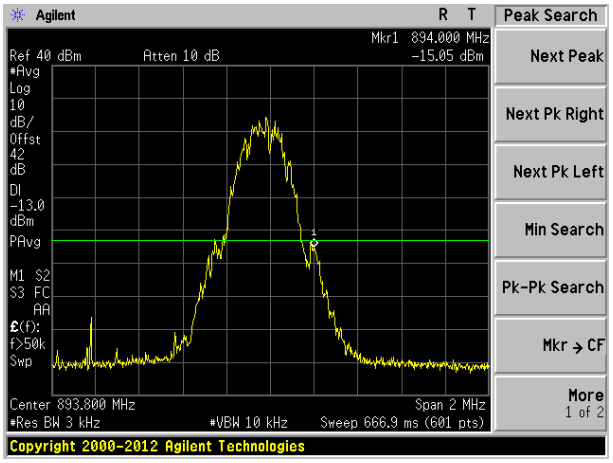
10.4.2 Band edge emission

Downlink:

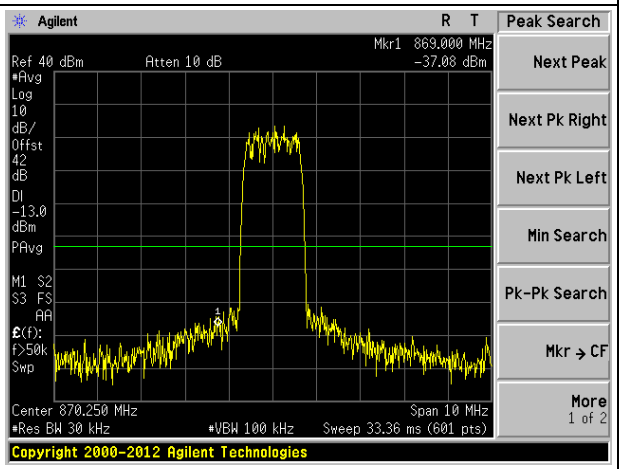
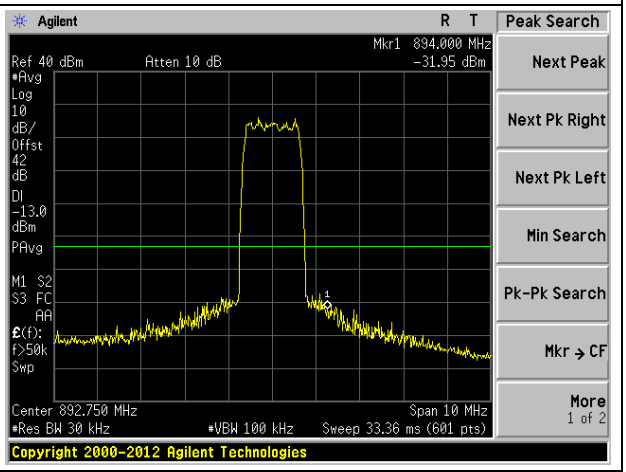
Band edge of GSM

Left edge of band	Right edge of band
	

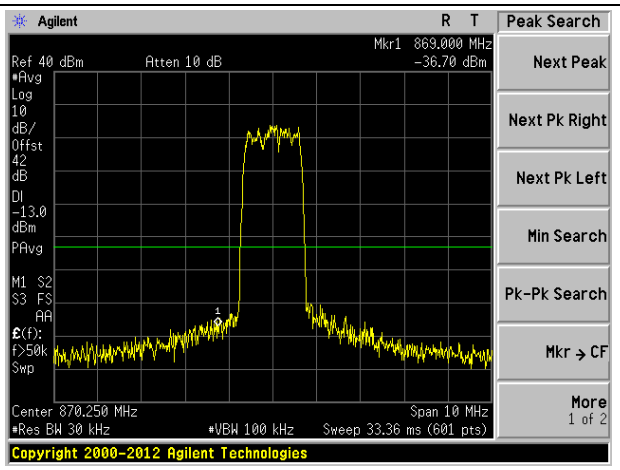
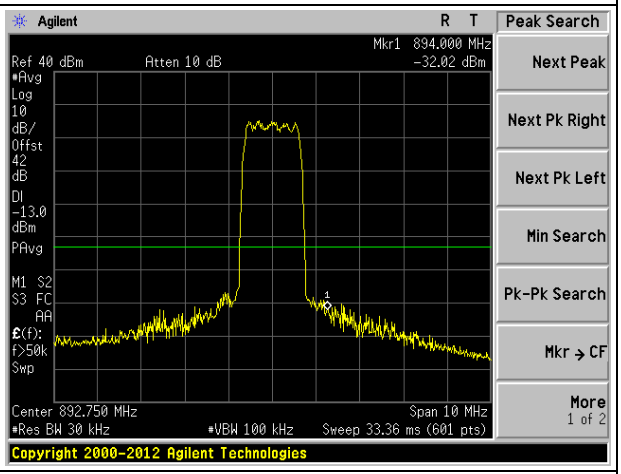
Band edge of EDGE

Left edge of band	Right edge of band
	

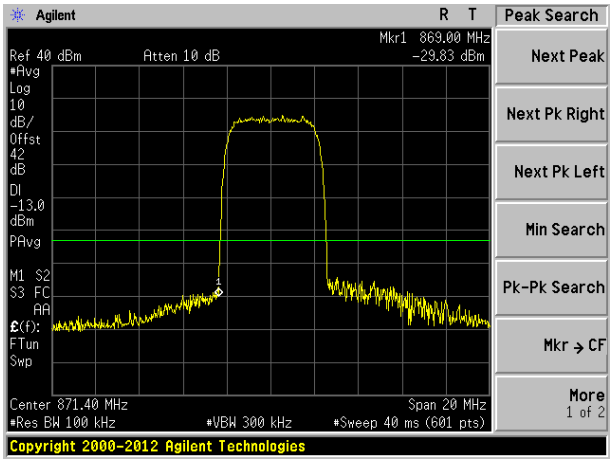
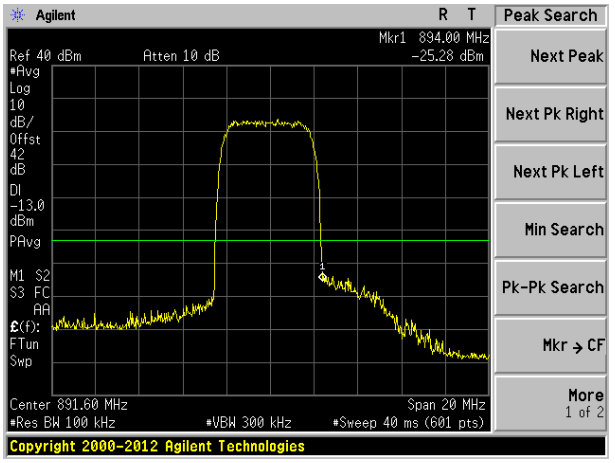
Band edge of CDMA

Left edge of band	Right edge of band
	

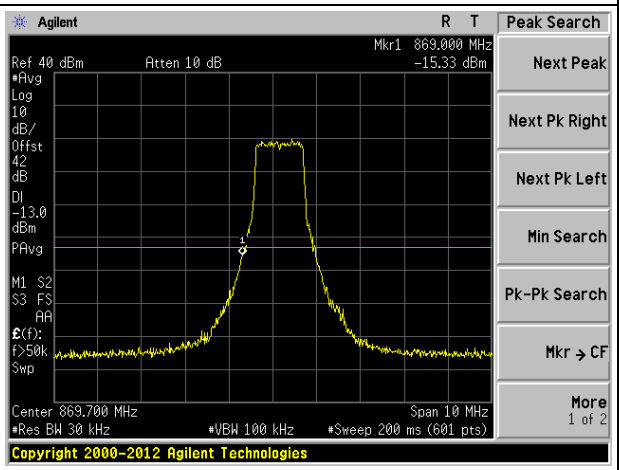
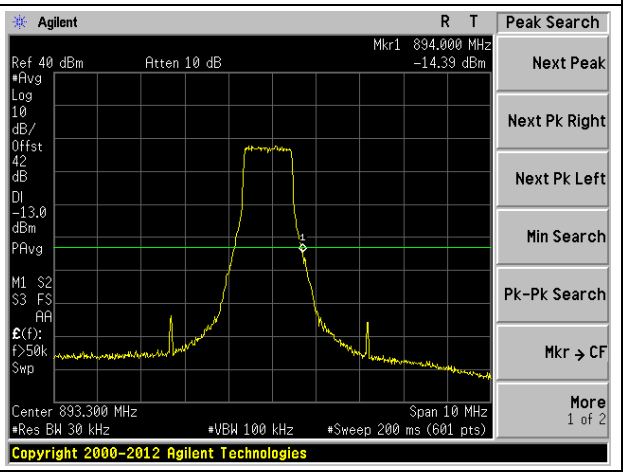
Band edge of CDMA-EVDO

Left edge of band	Right edge of band
	

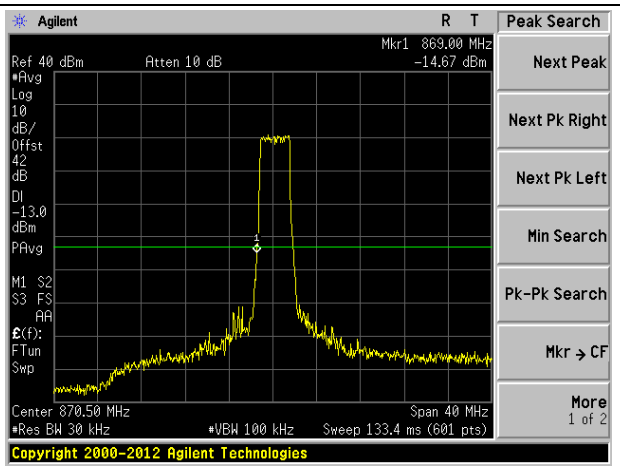
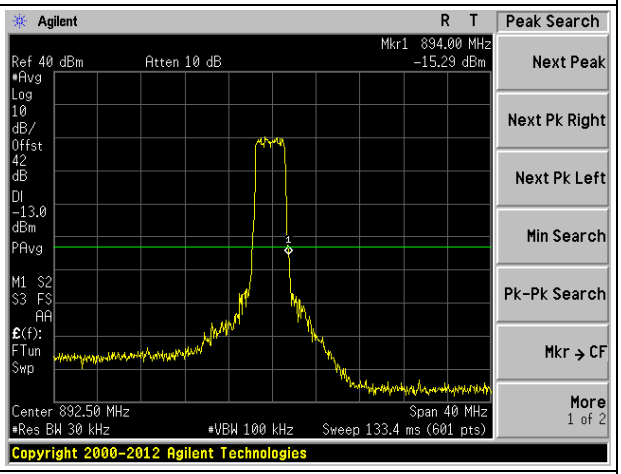
Band edge of WCDMA

Left edge of band	Right edge of band
	

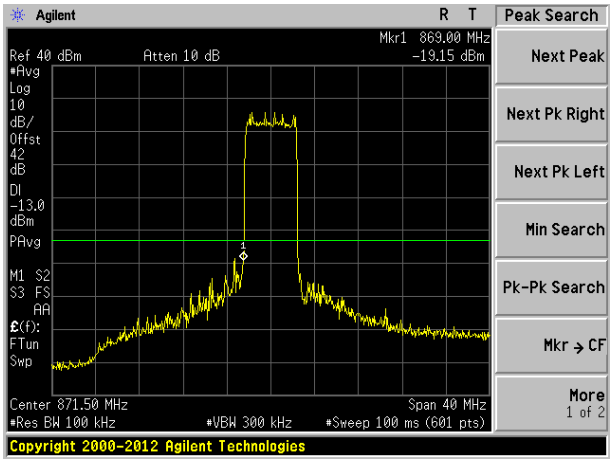
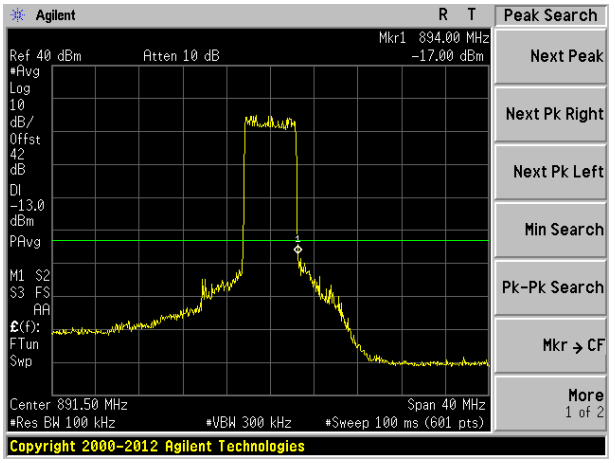
Band edge of LTE 1.4MHz Bandwidth

Left edge of band	Right edge of band
	

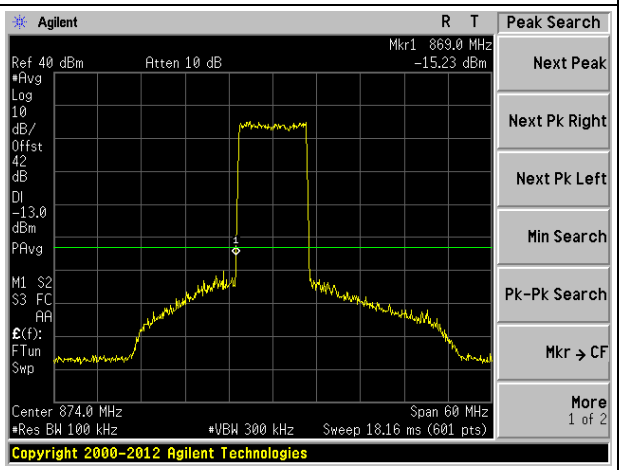
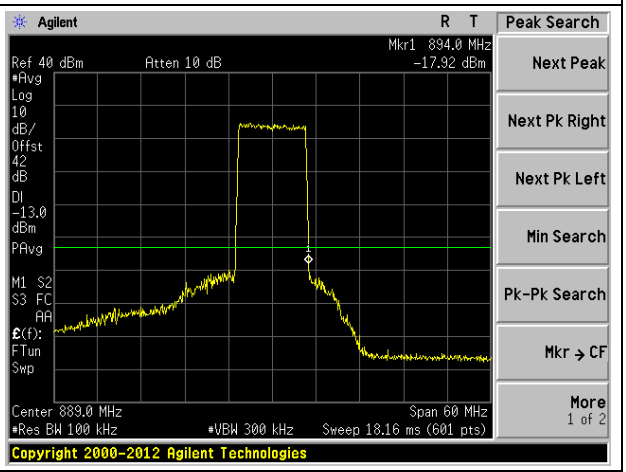
Band edge of LTE 3MHz Bandwidth

Left edge of band	Right edge of band
	

Band edge of LTE 5MHz Bandwidth

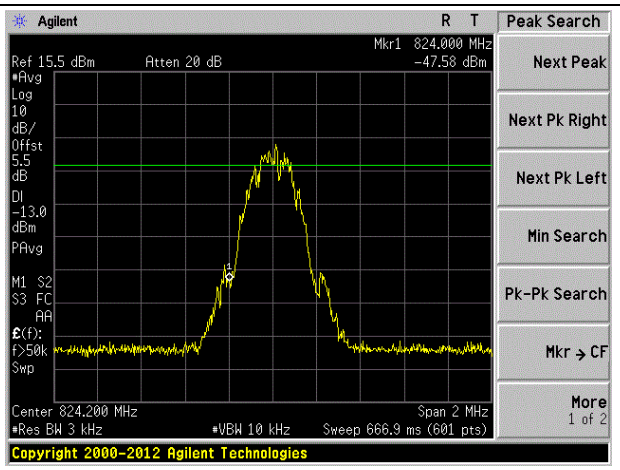
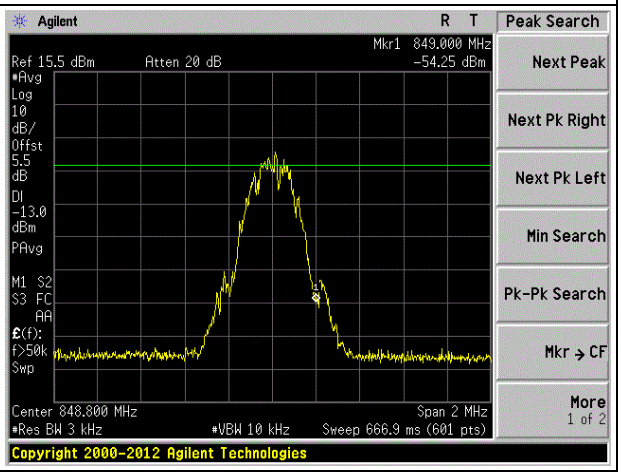
Left edge of band	Right edge of band
	

Band edge of LTE 10MHz Bandwidth

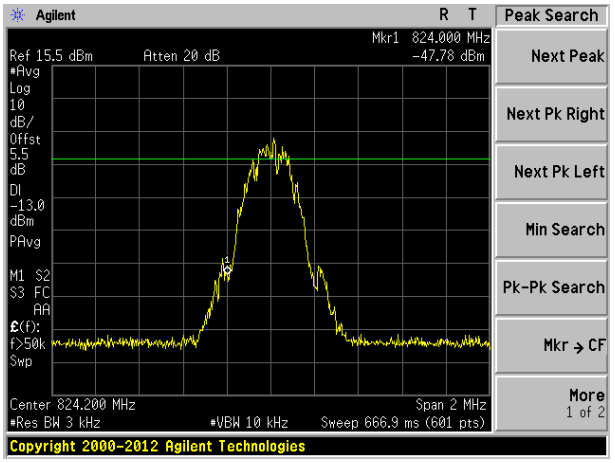
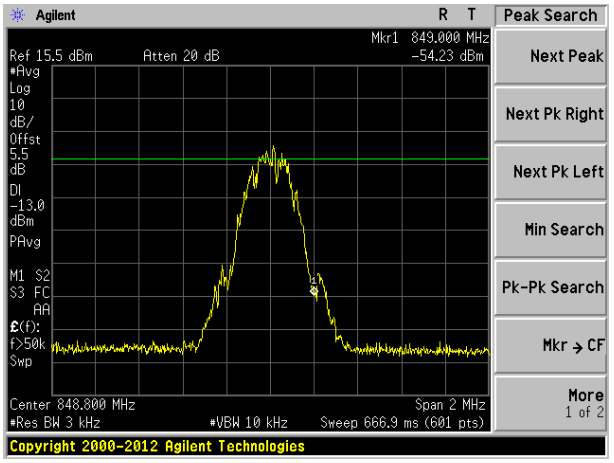
Left edge of band	Right edge of band
	

Uplink:

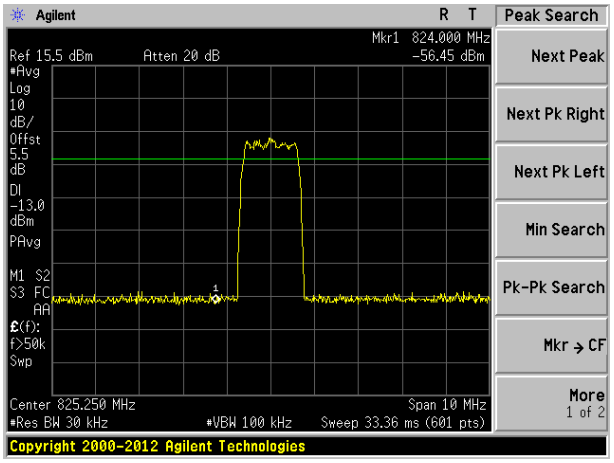
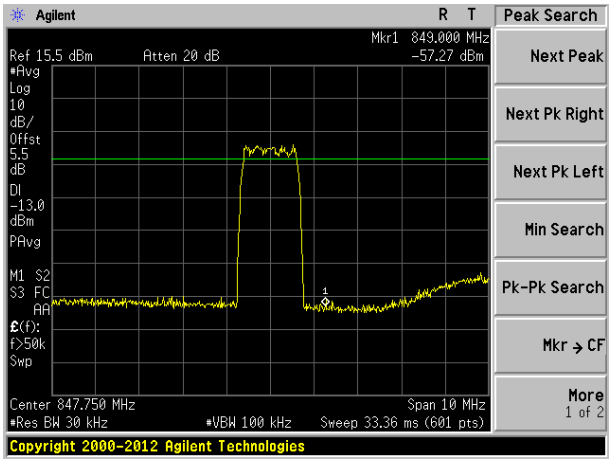
Band edge of GSM

Left edge of band	Right edge of band
	

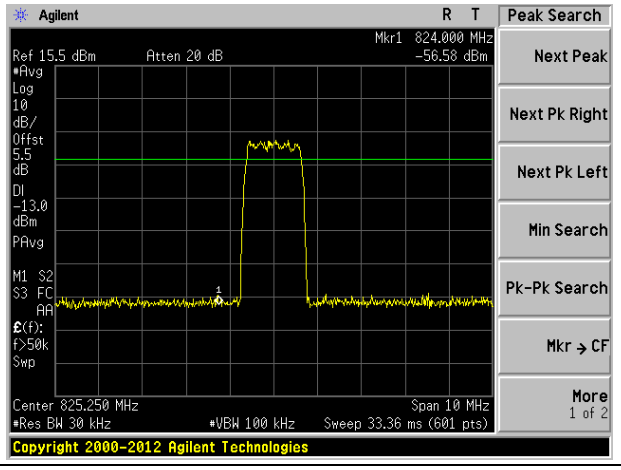
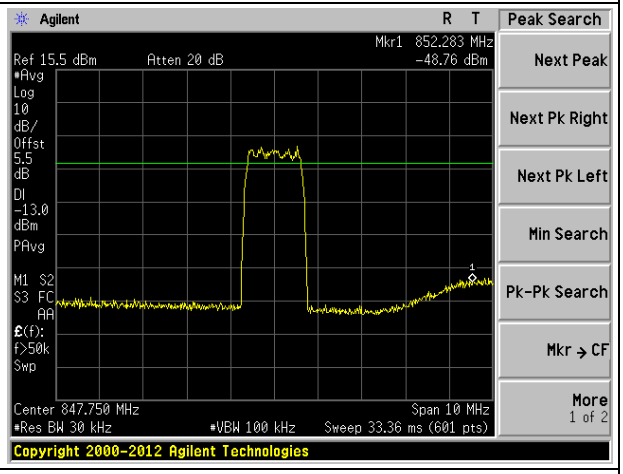
Band edge of EDGE

Left edge of band	Right edge of band
	

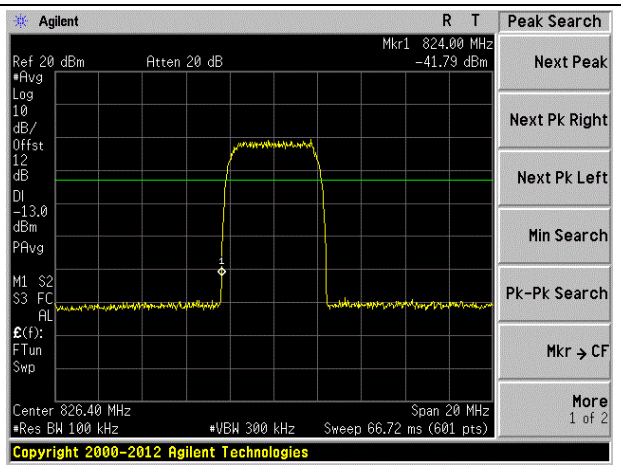
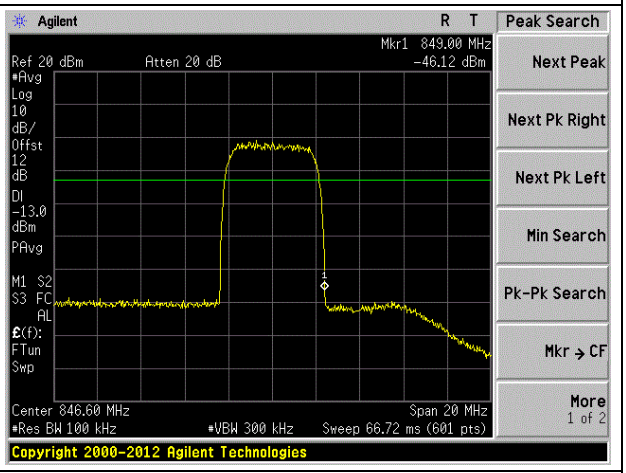
Band edge of CDMA

Left edge of band	Right edge of band
	

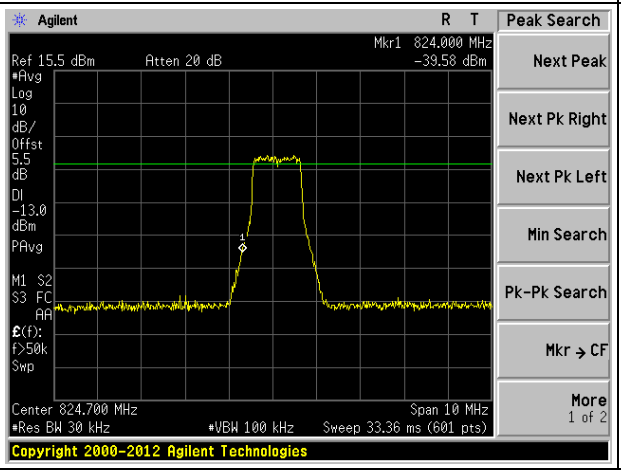
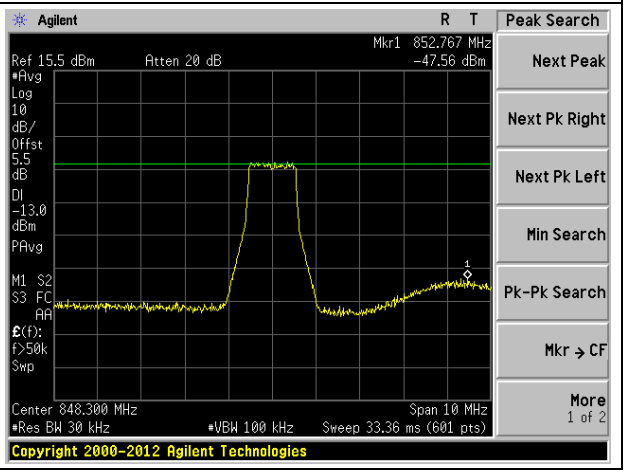
Band edge of CDMA-EVDO

Left edge of band	Right edge of band
	

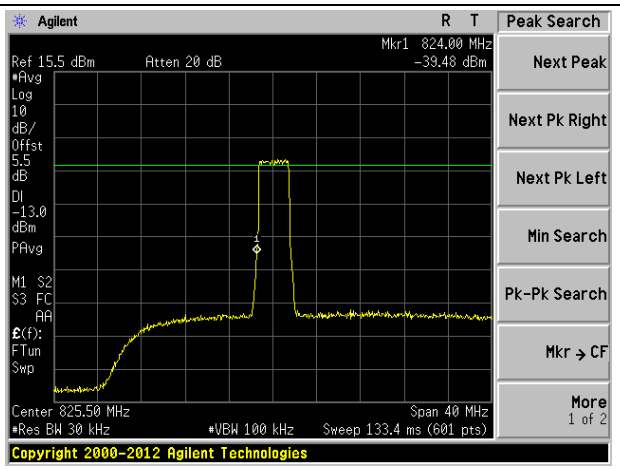
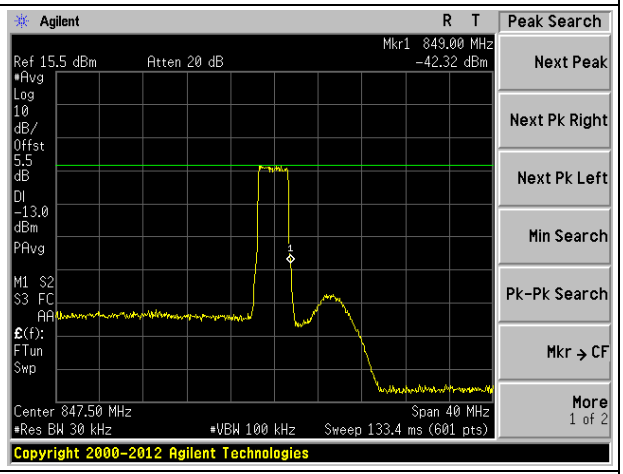
Band edge of WCDMA

Left edge of band	Right edge of band
	

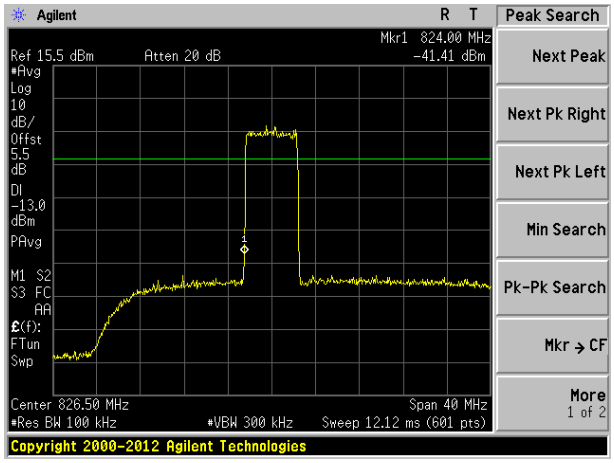
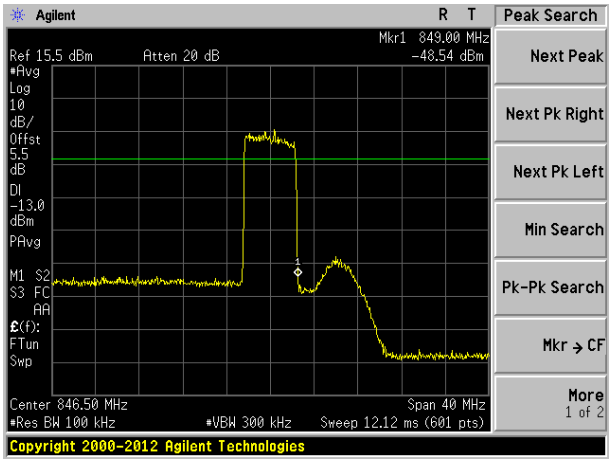
Band edge of LTE 1.4MHz Bandwidth

Left edge of band	Right edge of band
	

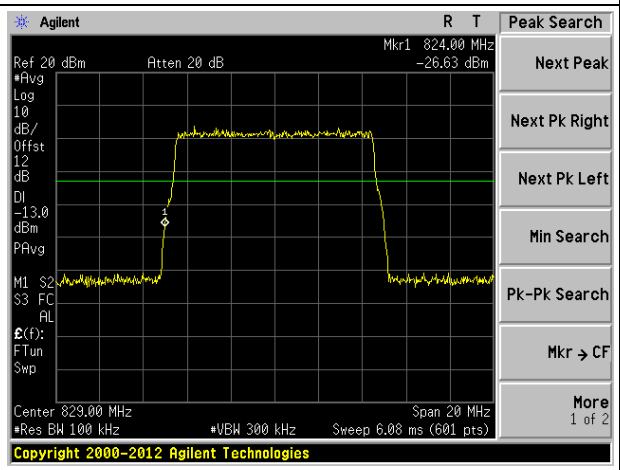
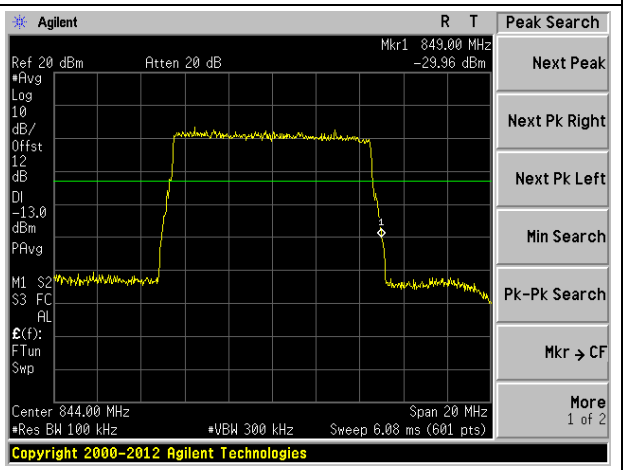
Band edge of LTE 3MHz Bandwidth

Left edge of band	Right edge of band
	

Band edge of LTE 5MHz Bandwidth

Left edge of band	Right edge of band
	

Band edge of LTE 10MHz Bandwidth

Left edge of band	Right edge of band
	

11 INTERMODULATION

11.1 Standard Applicable

According to FCC § 2.1051 and § 22.917(a).

11.2 Test setup

Please refer the section §6.2 Configuration of Tested System.

11.3 Measurement Procedure

1. The EUT RF output port was connected to spectrum analyzer. The EUT shall be set to maximum gain
   and maximum rated output power per channel.
2. Two continuous sinusoidal RF signals shall be fed to the input antenna port of the repeater using a combining device. The two channels near each other should be separated by at least one operating channel width.
3. The spurious emissions at antenna were measured at the RF output port of the EUT.
4. The modulation types tested is WCDMA/CDMA/CDMA EV-DO/GSM/EDGE/LTE

Spectrum analyzer settings:

Detector: RMS.

Intermodulation:

RBW=100 kHz; VBW≥ RBW

Spurious emissions:

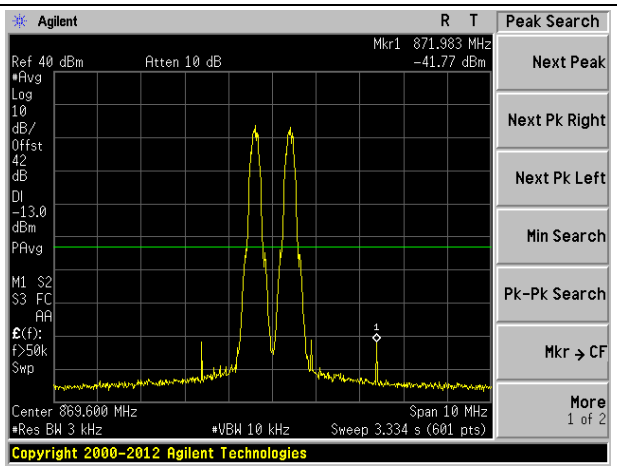
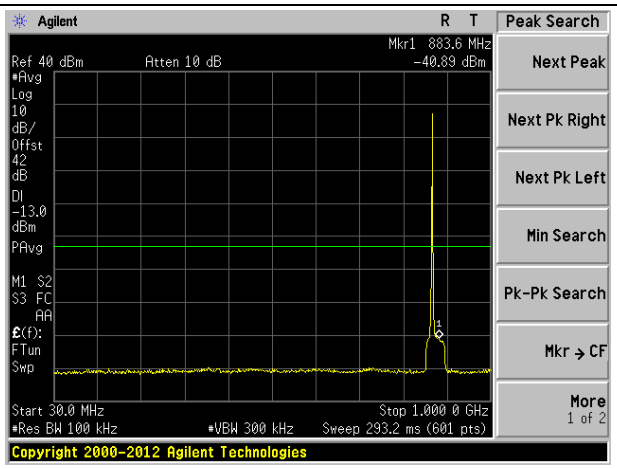
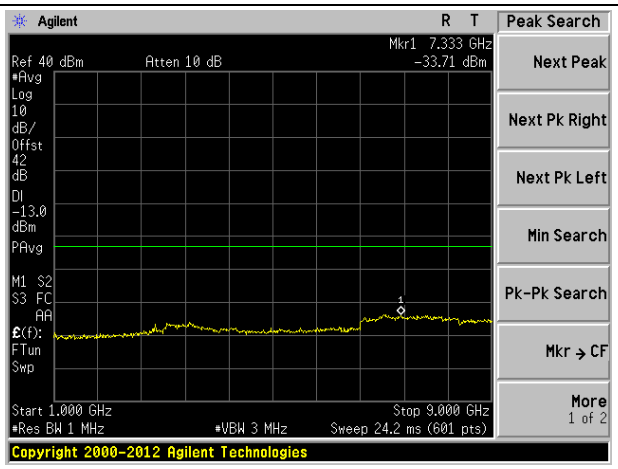
Below 1G: RBW=100kHz; Above 1G: RBW=1 MHz ; VBW≥ RBW

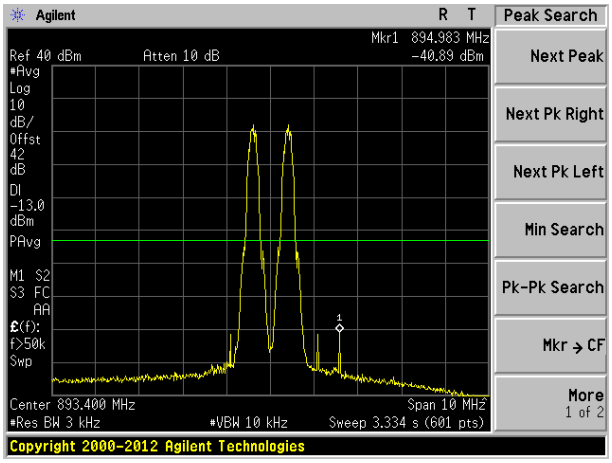
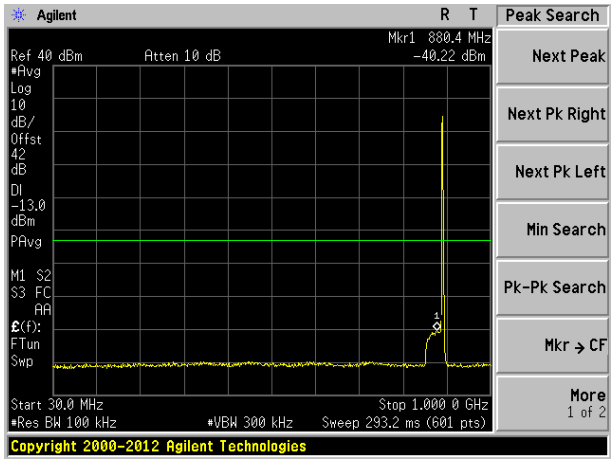
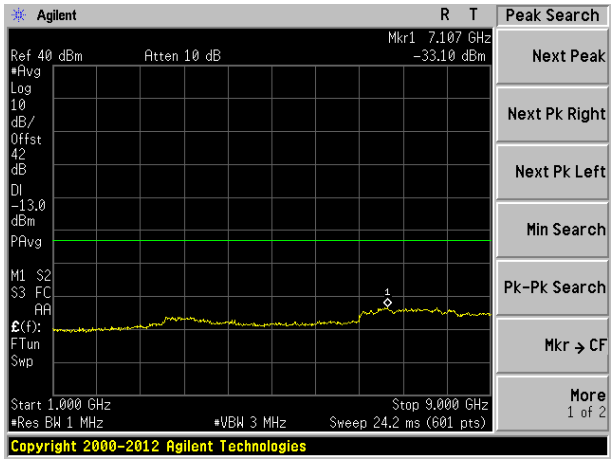
11.4 Test Result

Passed.

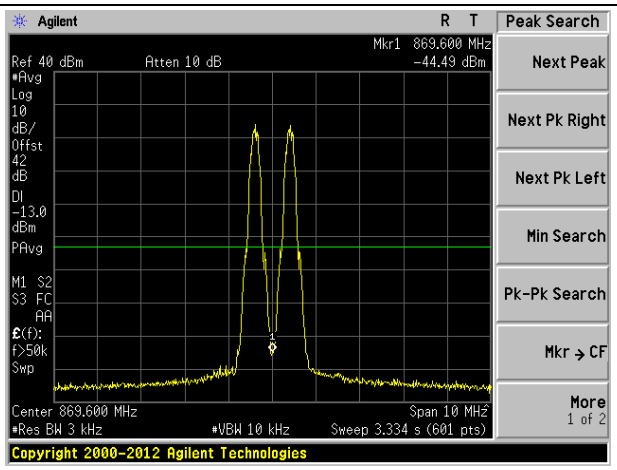
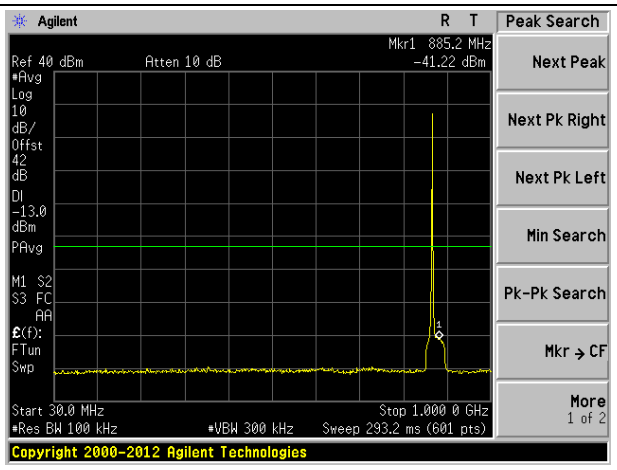
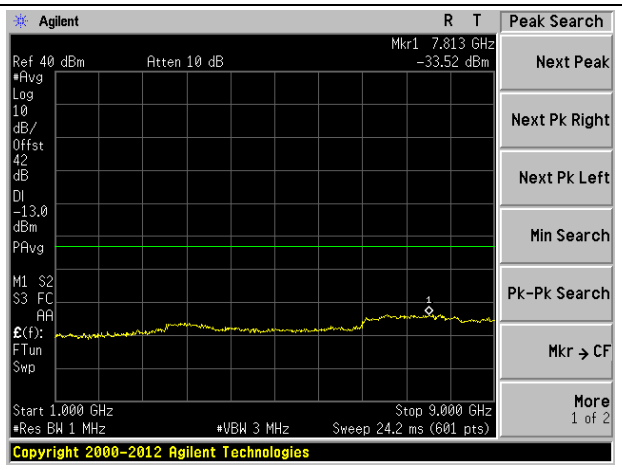
Downlink:

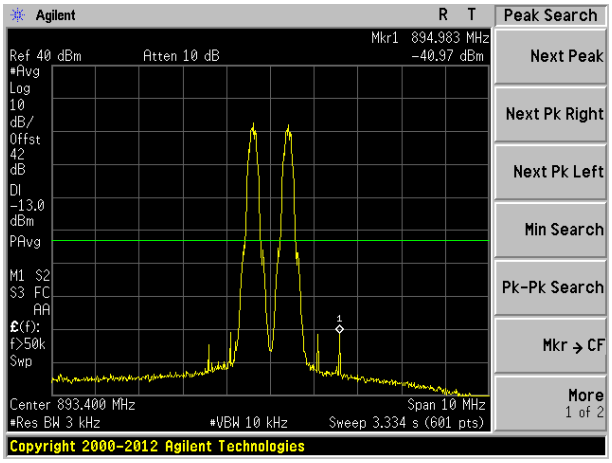
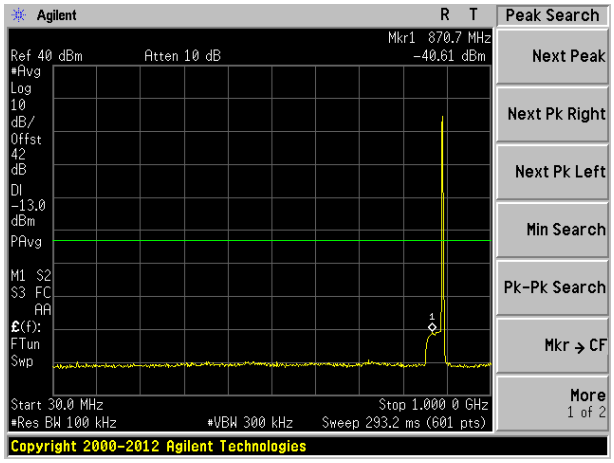
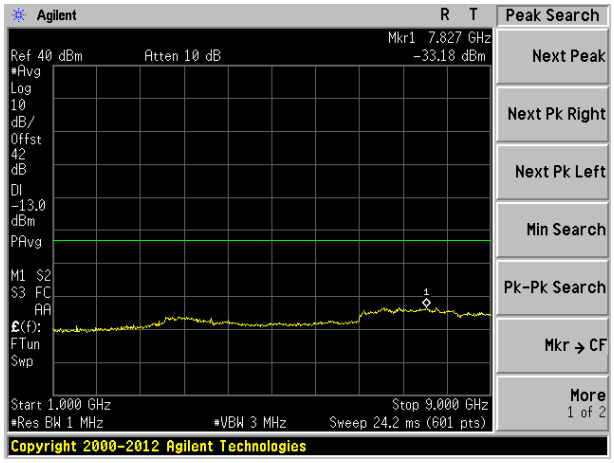
Intermodulation of GSM

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


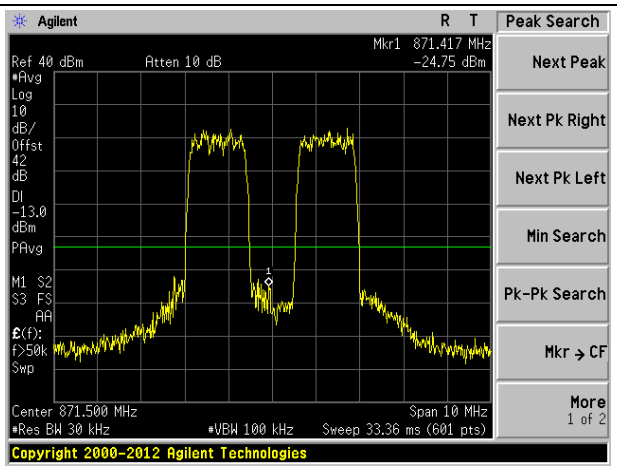
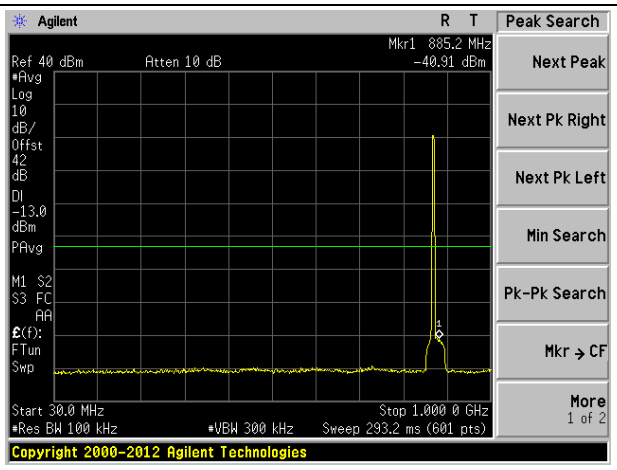
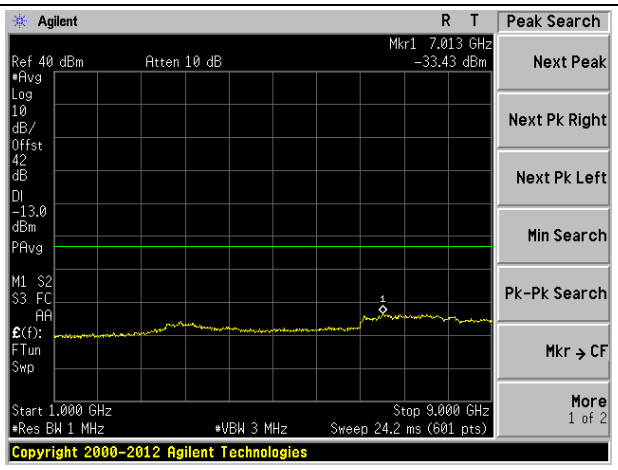
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


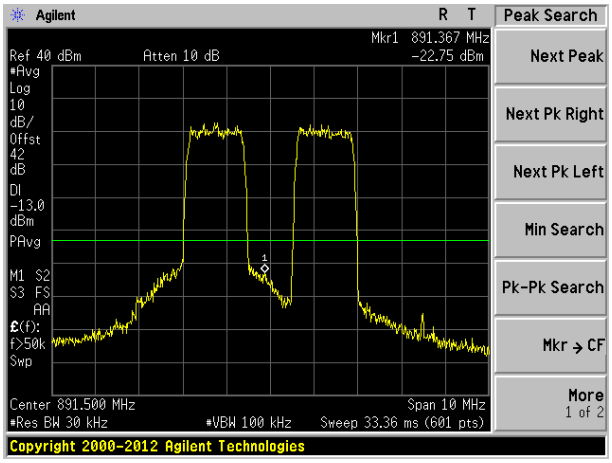
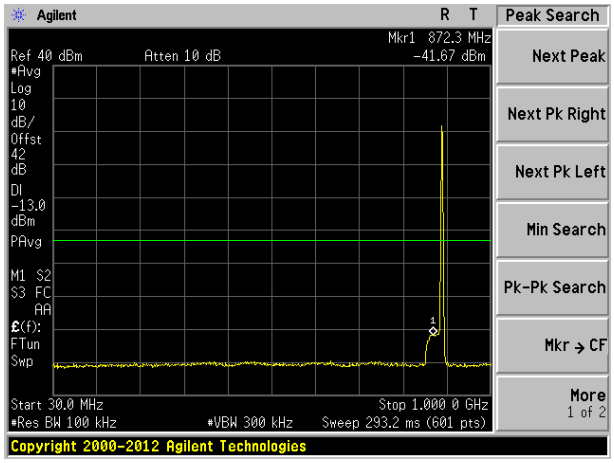
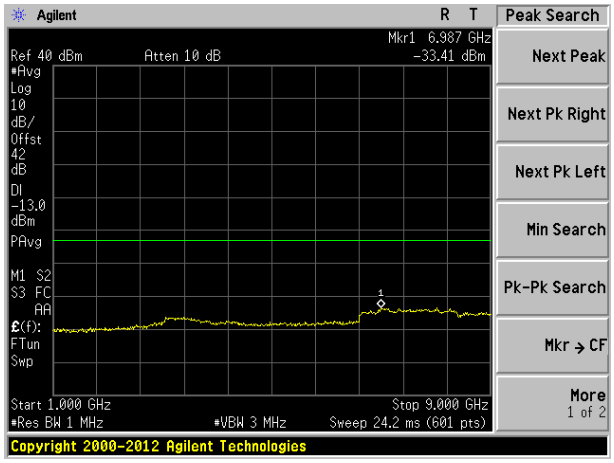
Intermodulation of EDGE

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


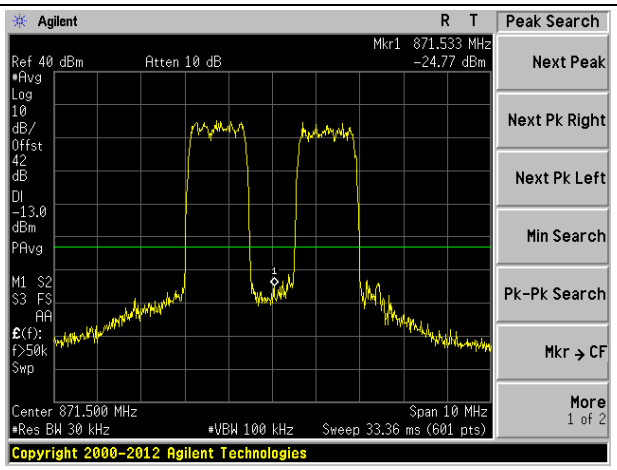
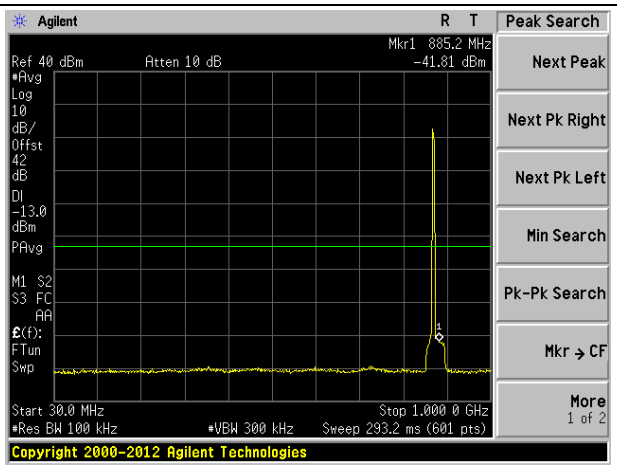
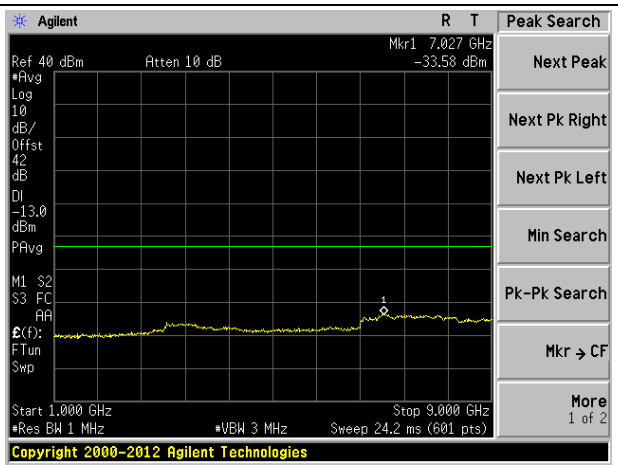
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


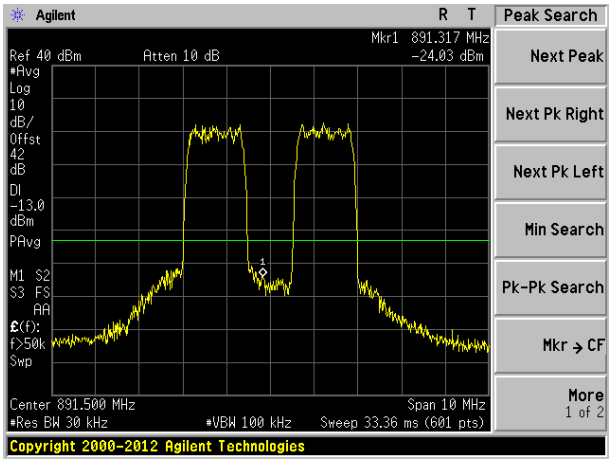
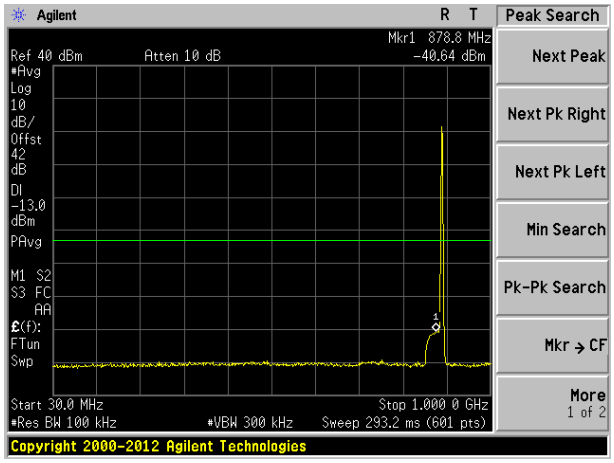
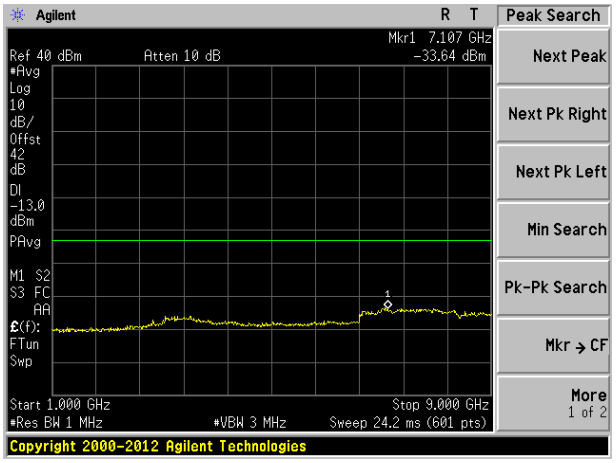
Intermodulation of CDMA

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


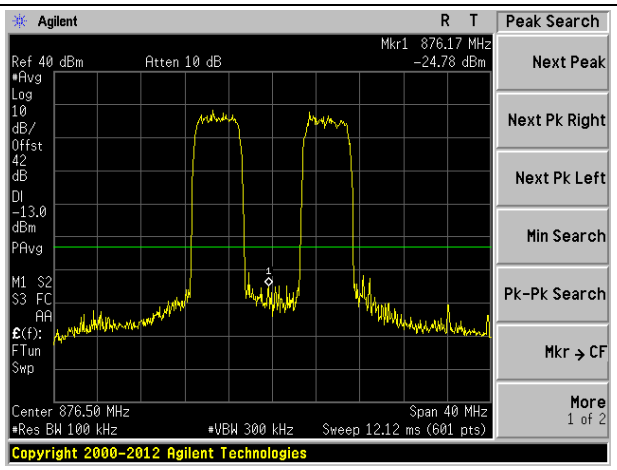
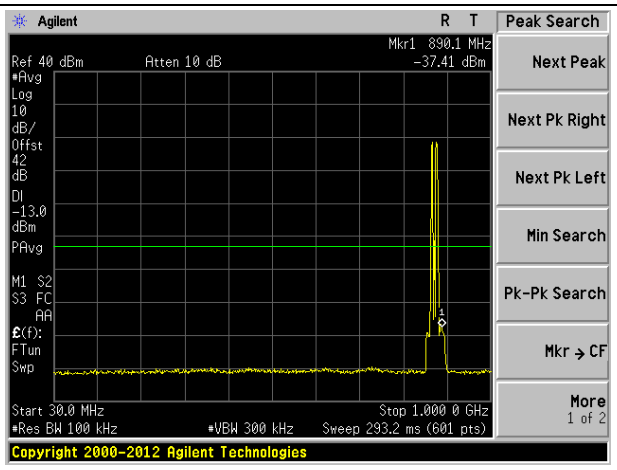
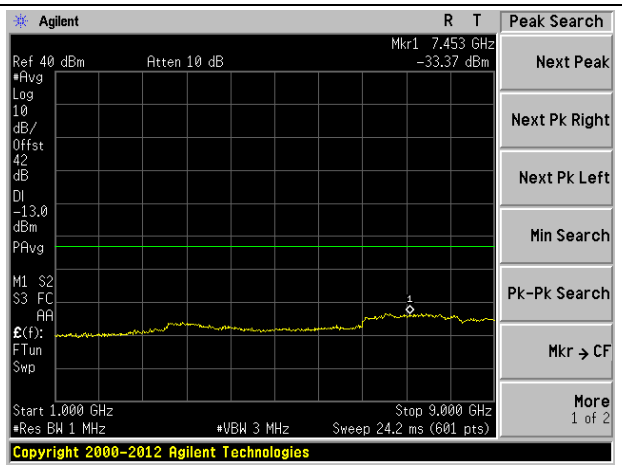
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


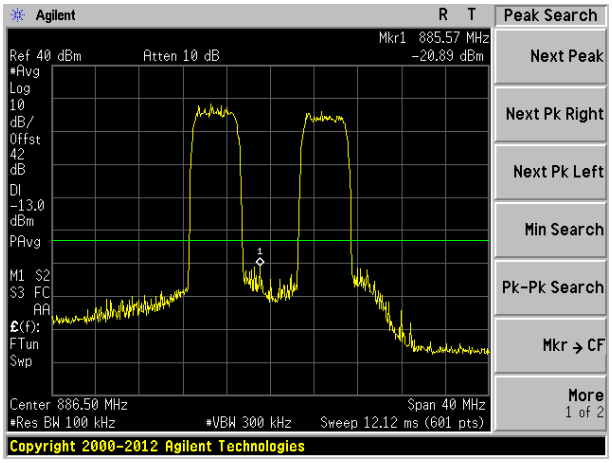
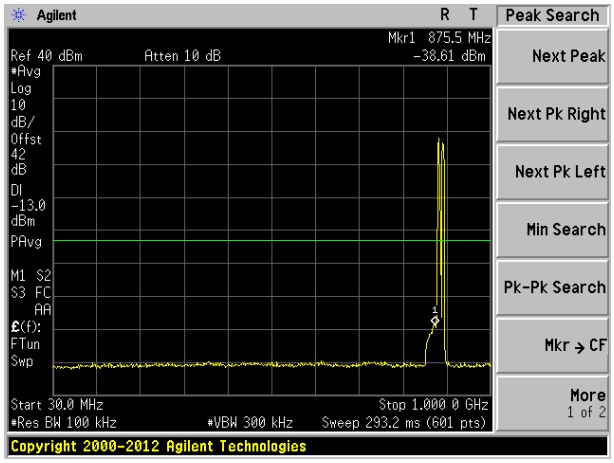
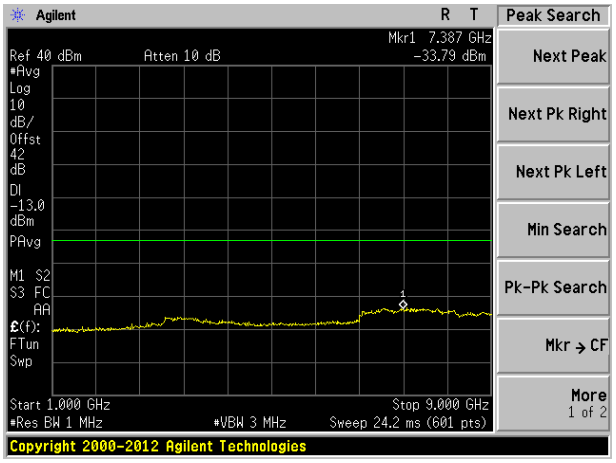
Intermodulation of CDMA-EVDO

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


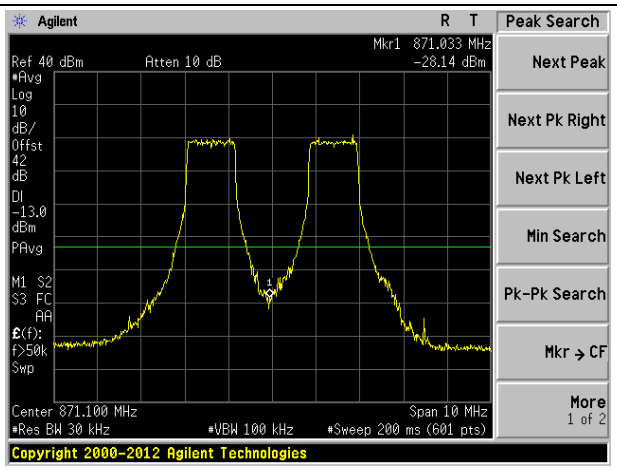
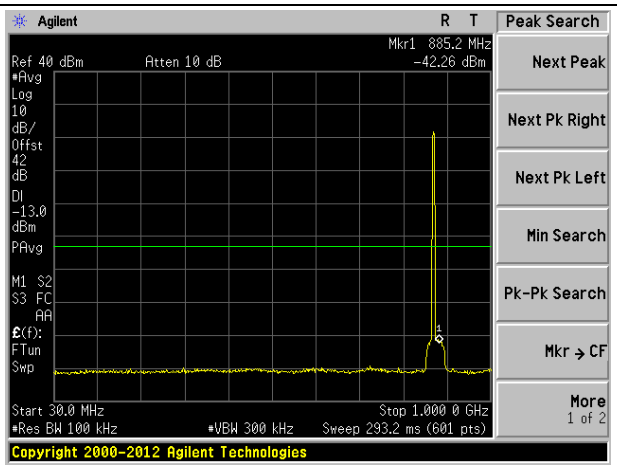
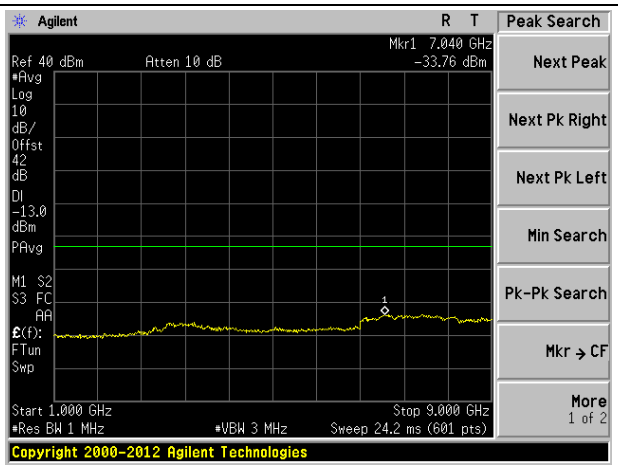
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


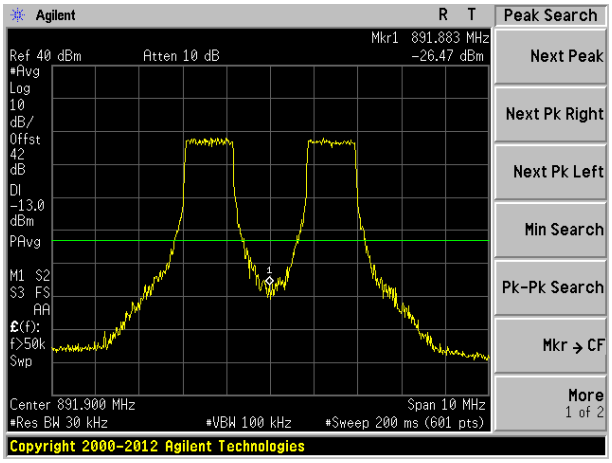
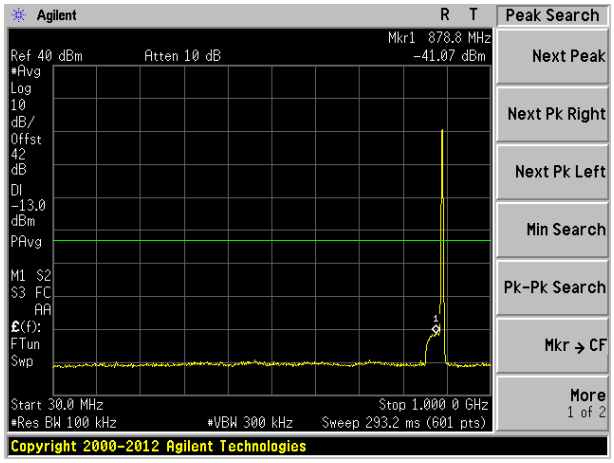
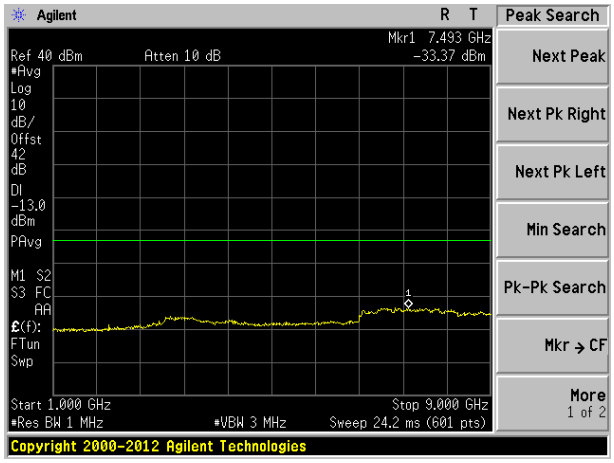
Intermodulation of WCDMA

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


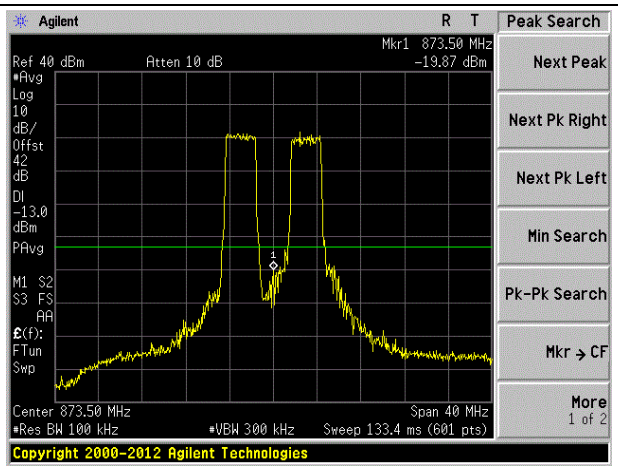
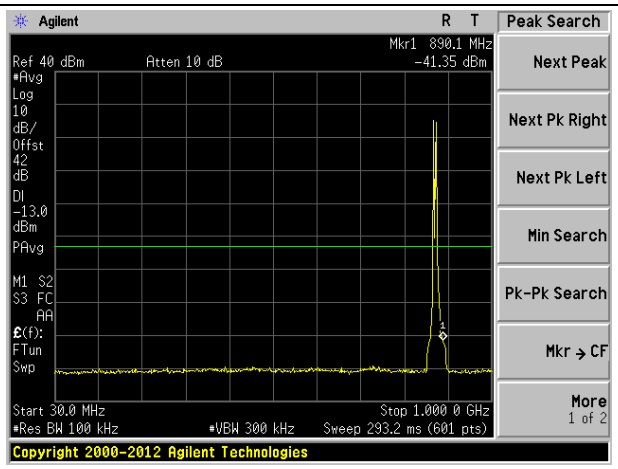
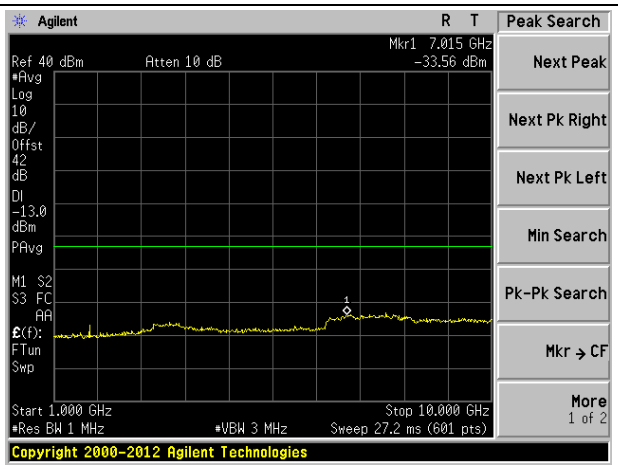
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


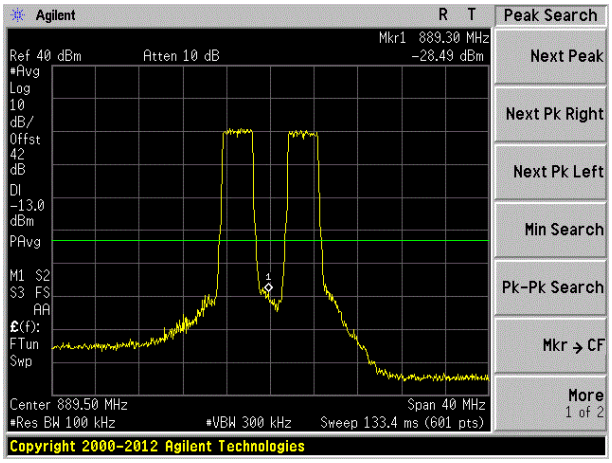
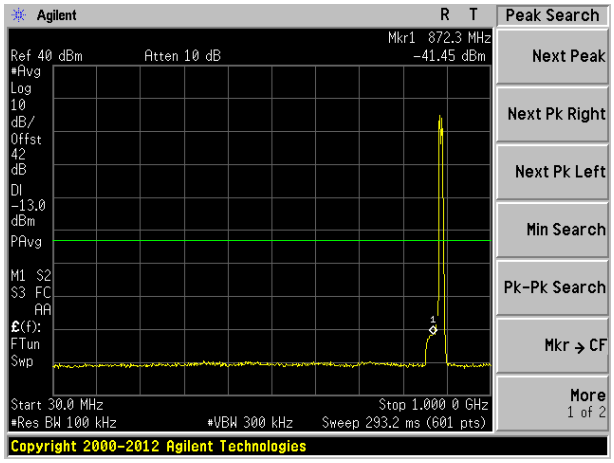
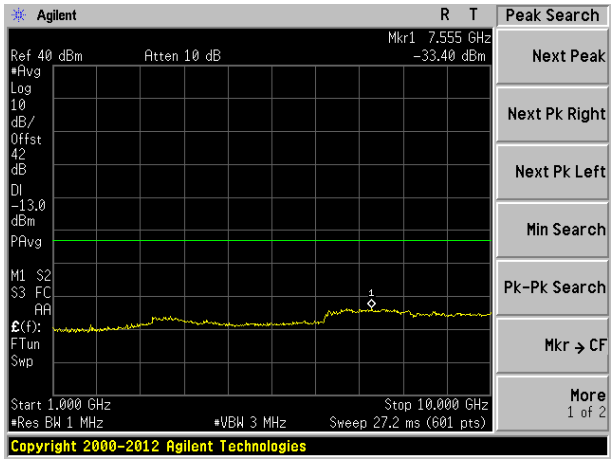
Intermodulation of LTE 1.4MHz Bandwidth

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


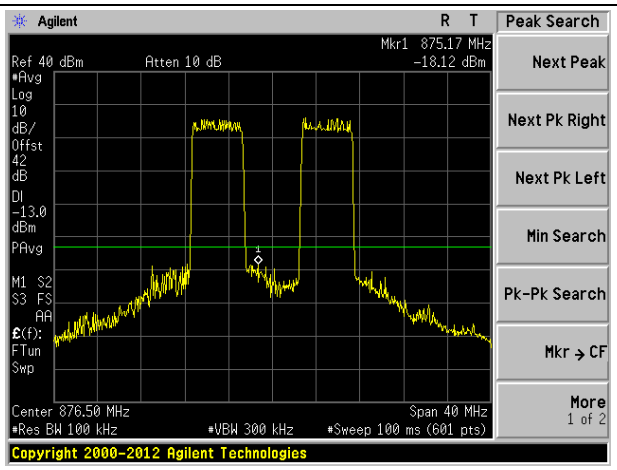
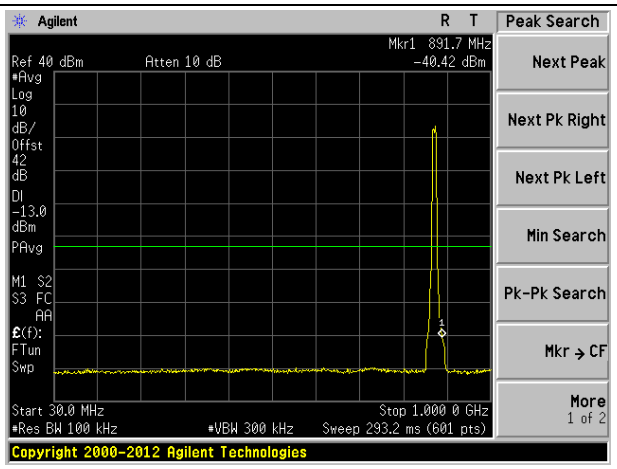
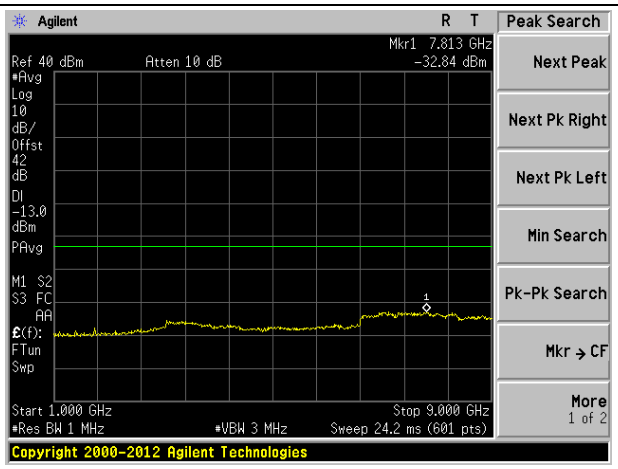
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


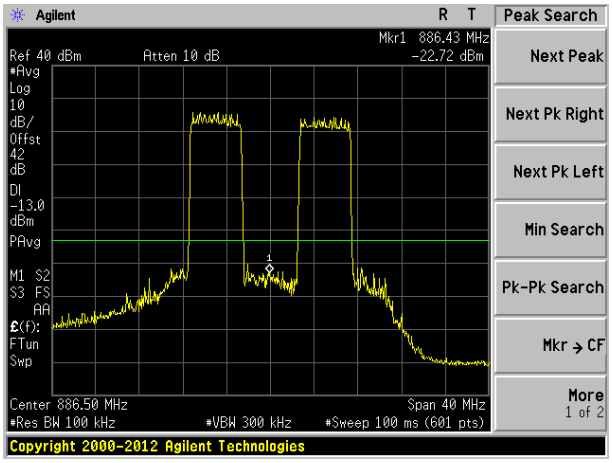
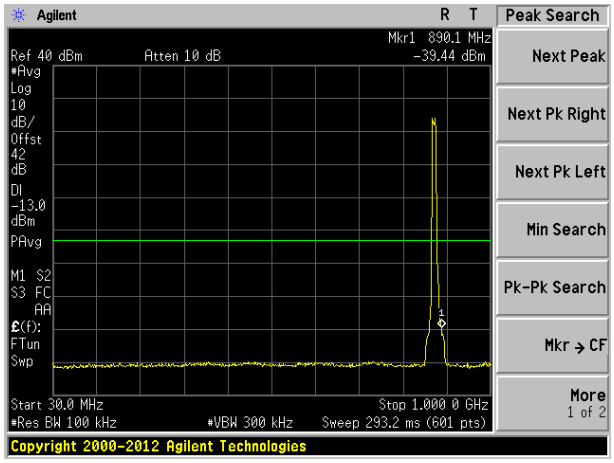
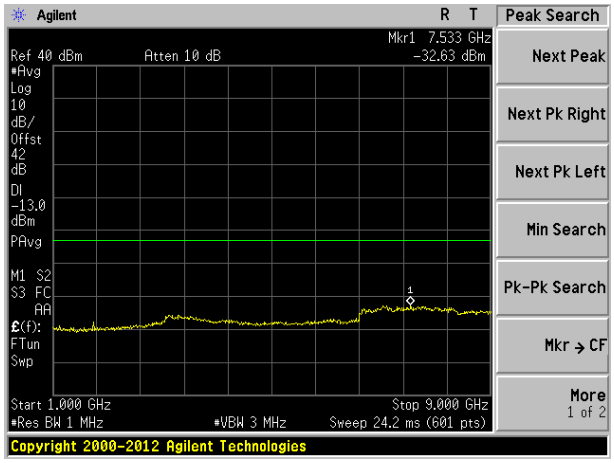
Intermodulation of LTE 3MHz Bandwidth

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


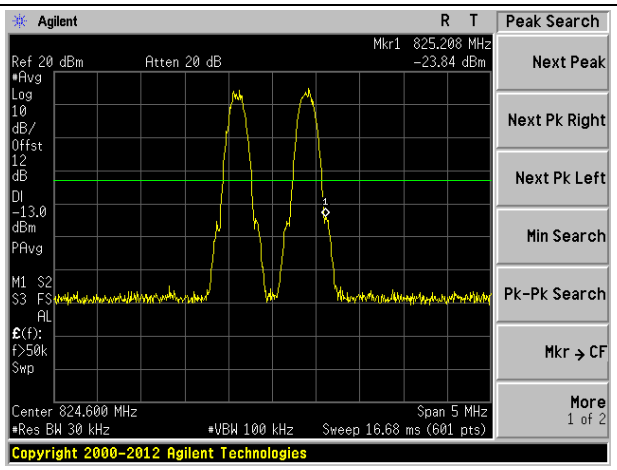
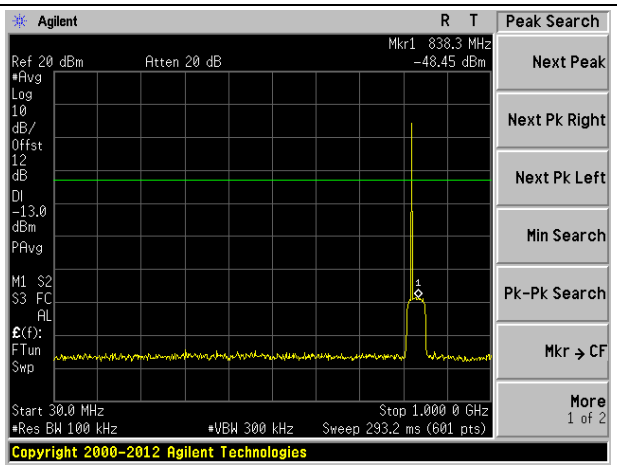
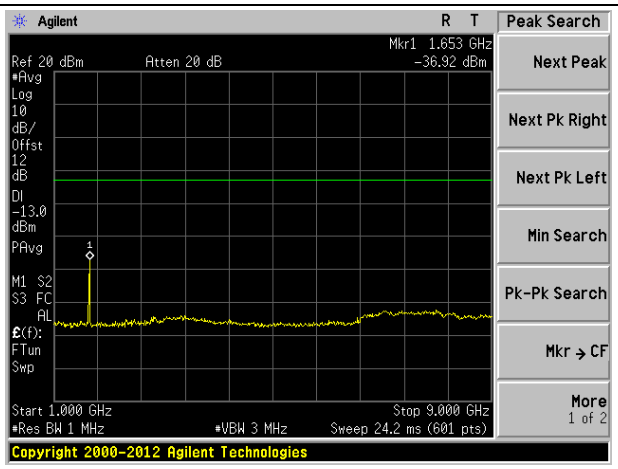
Intermodulation of LTE 5MHz Bandwidth

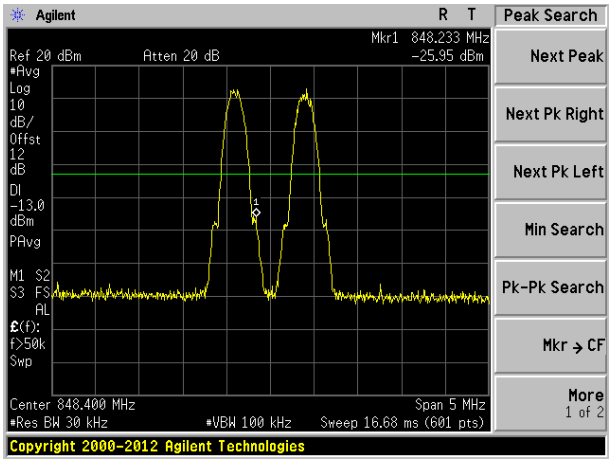
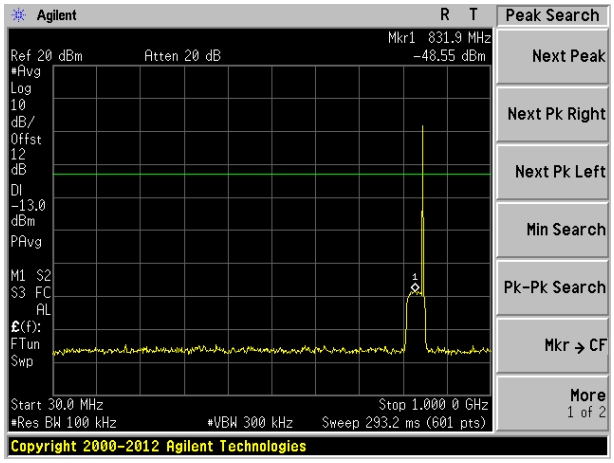
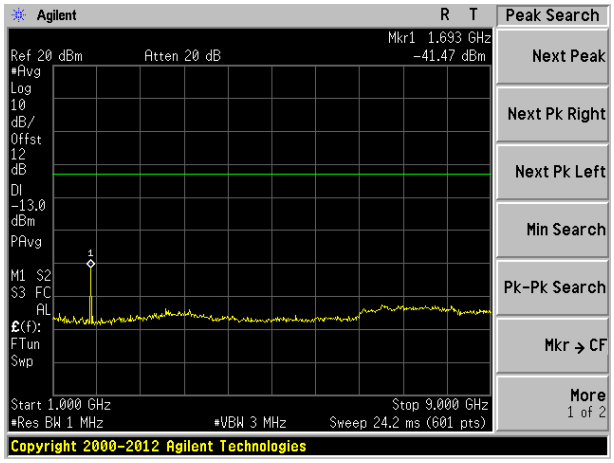
Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


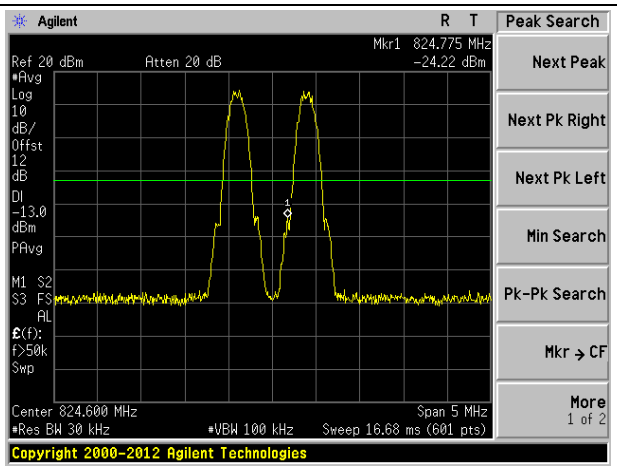
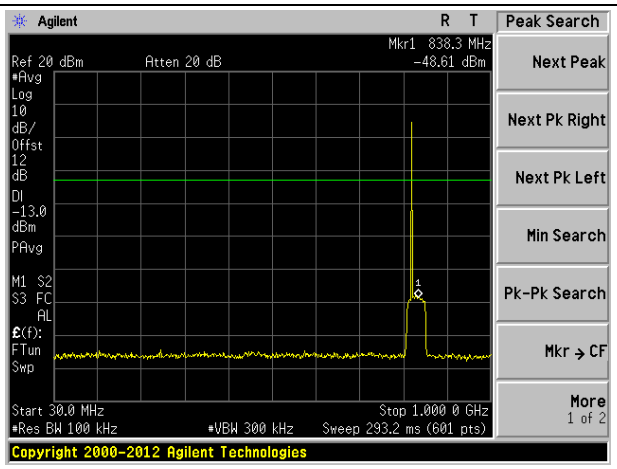
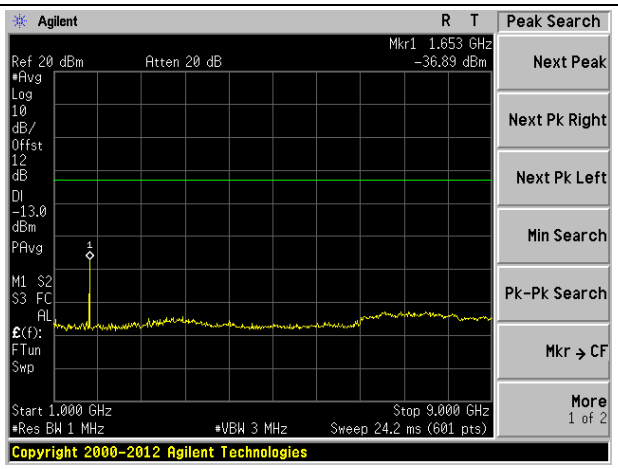
Uplink:

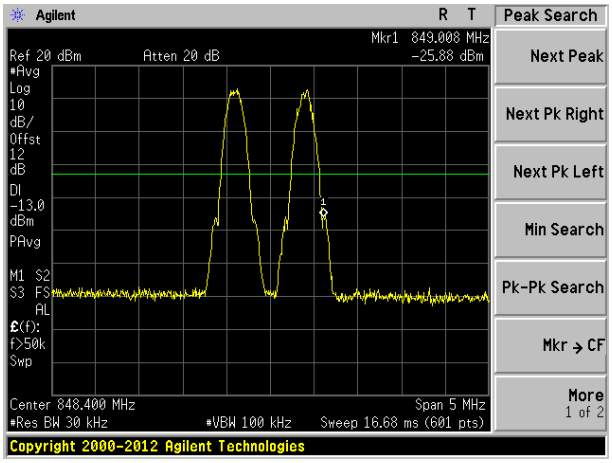
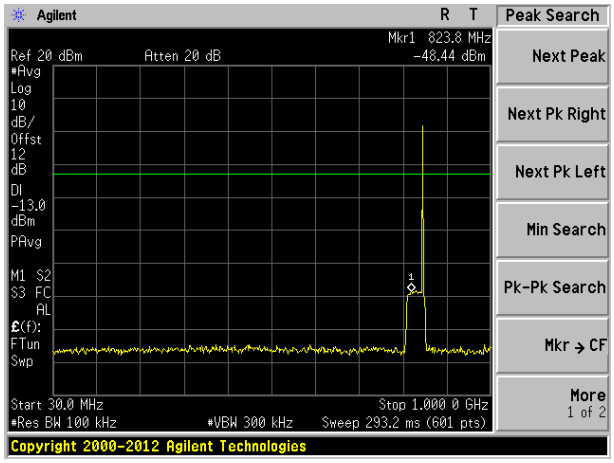
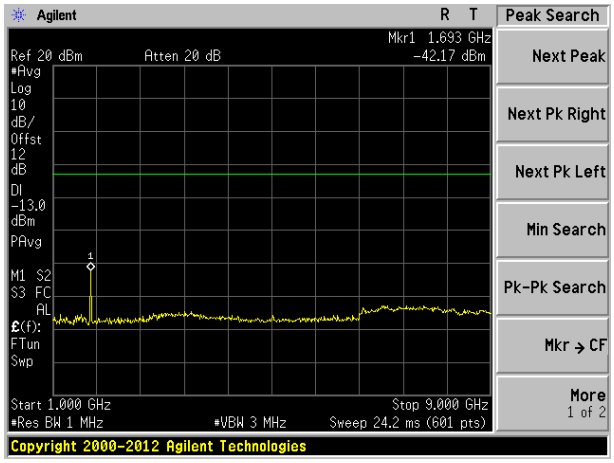
Intermodulation of GSM

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


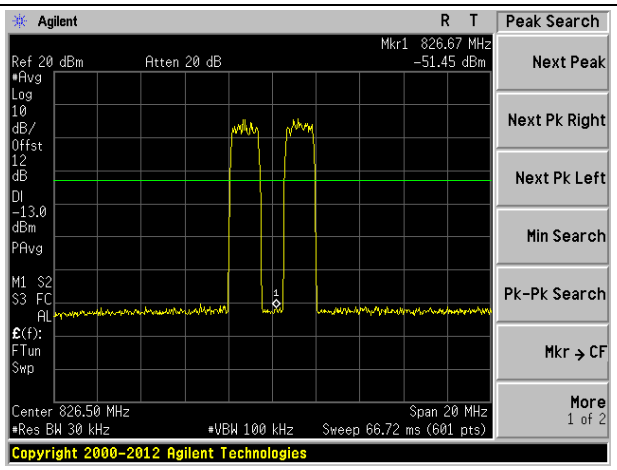
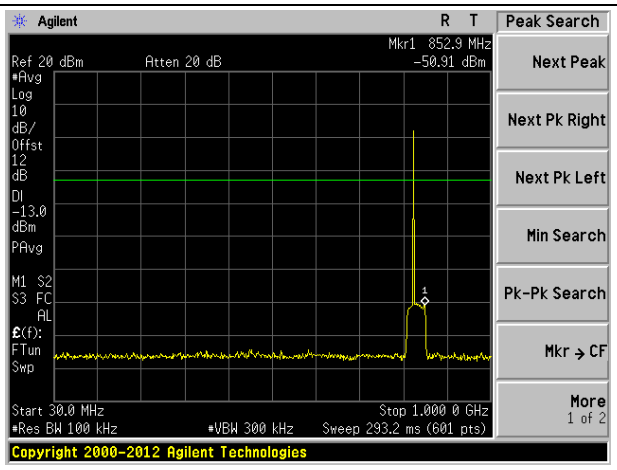
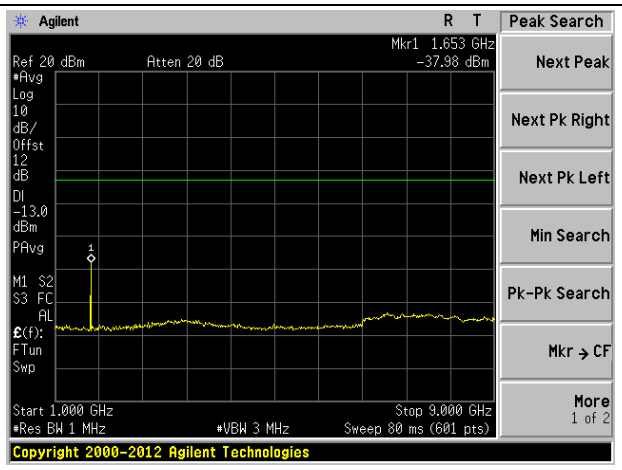
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


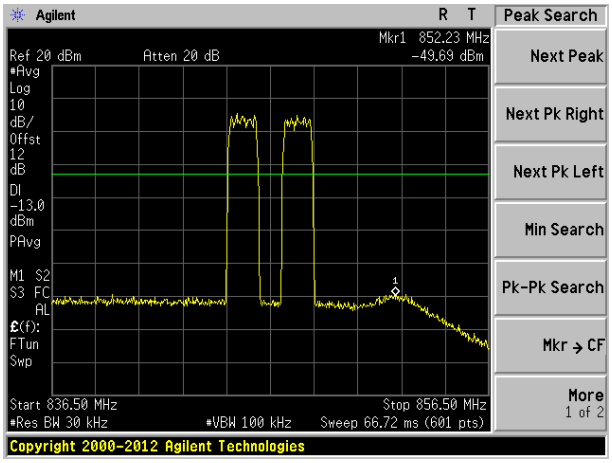
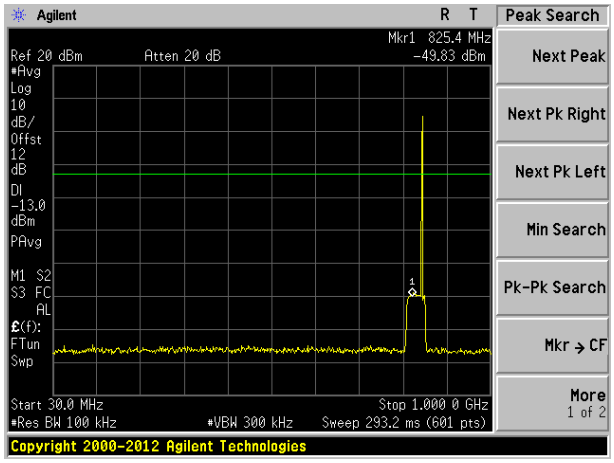
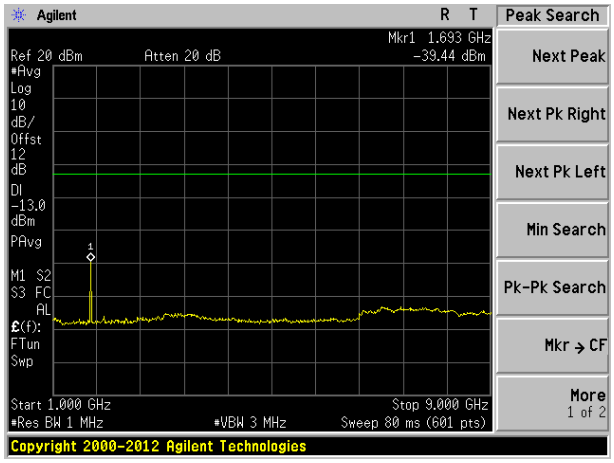
Intermodulation of EDGE

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


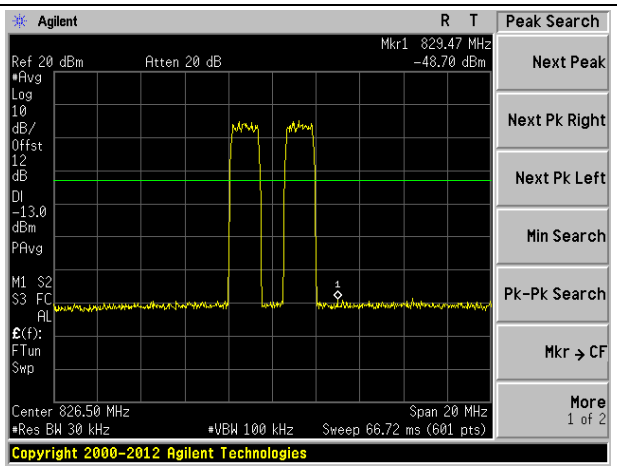
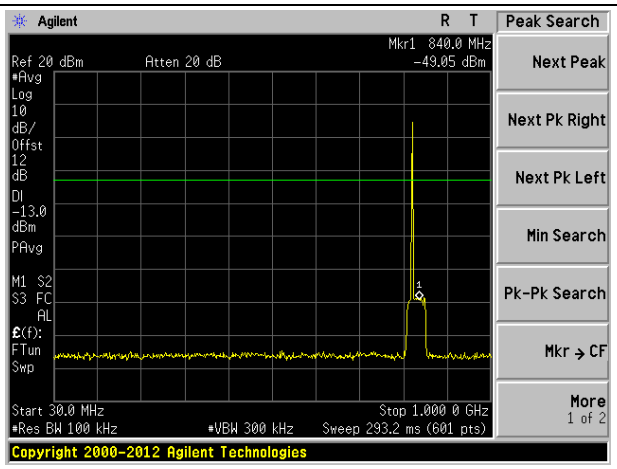
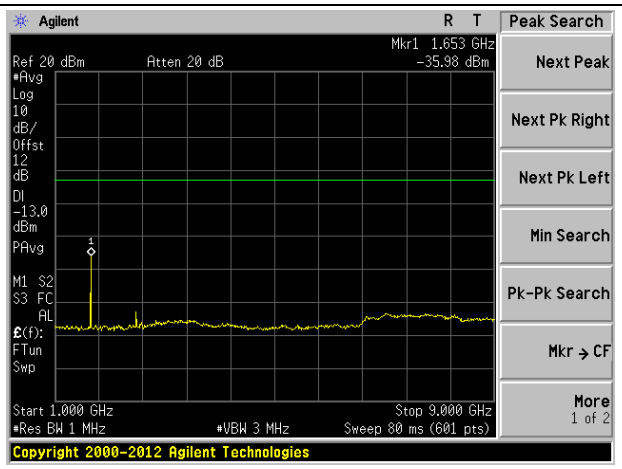
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


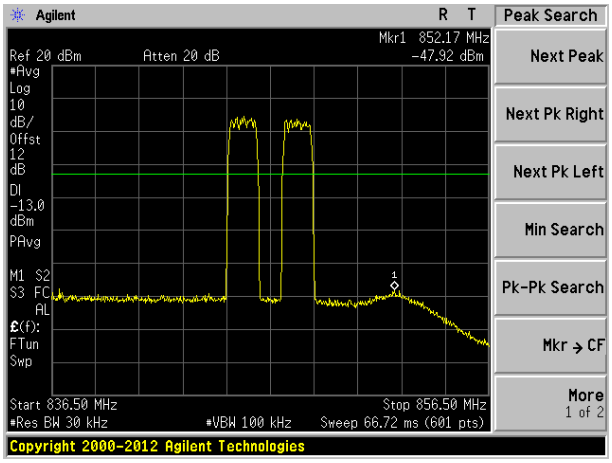
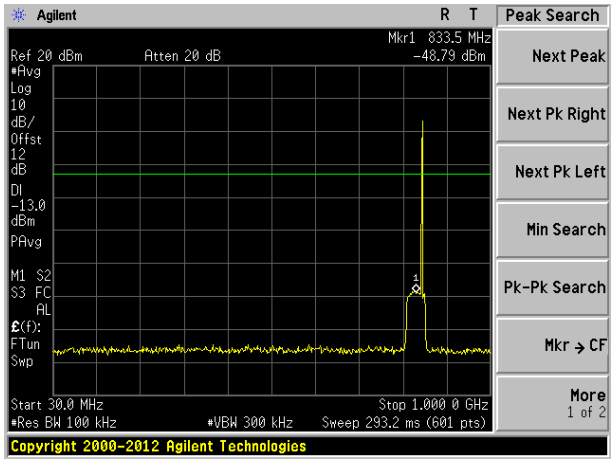
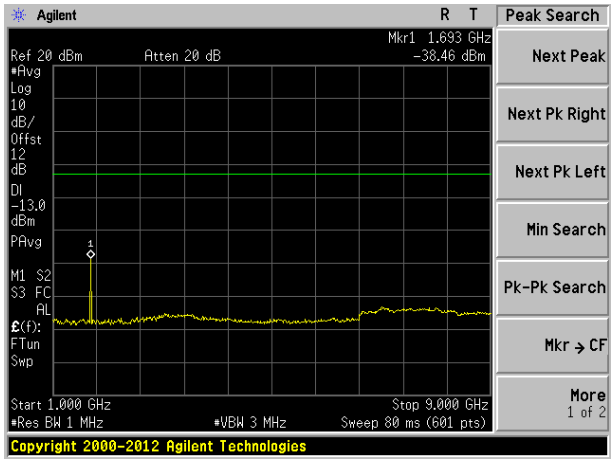
Intermodulation of CDMA

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


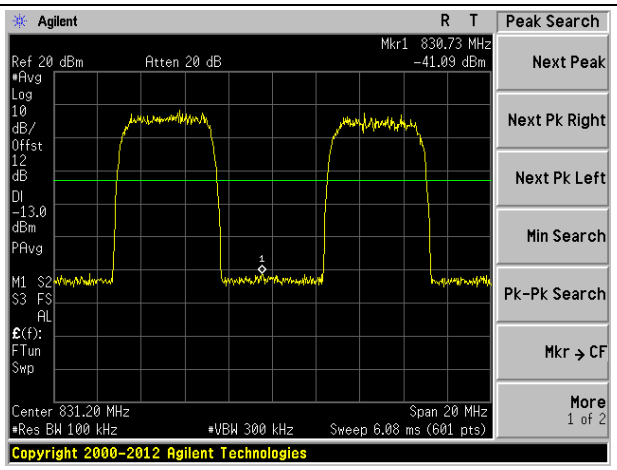
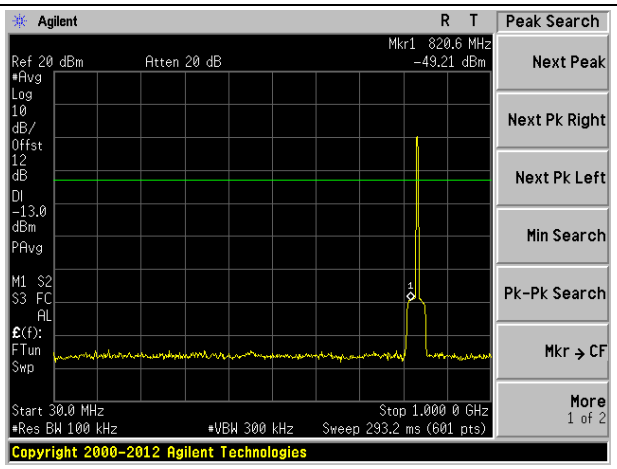
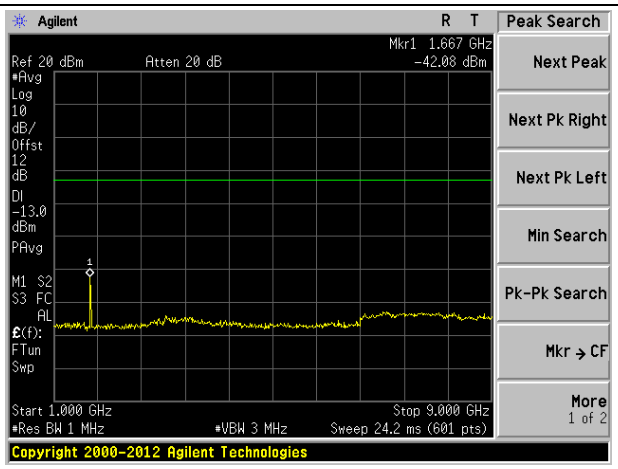
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


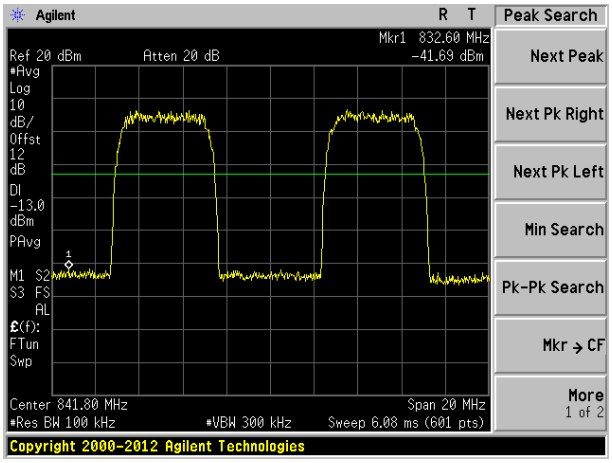
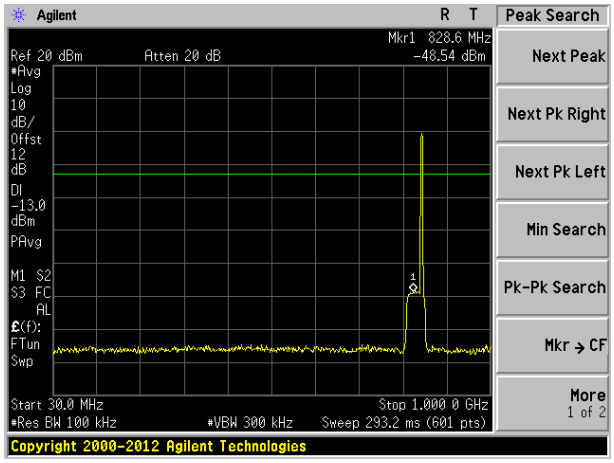
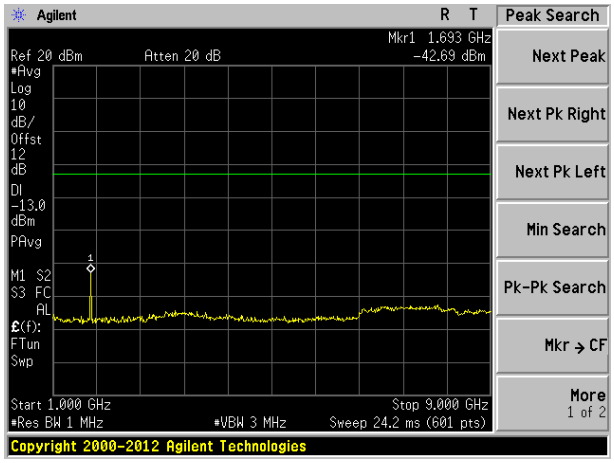
Intermodulation of CDMA-EVDO

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


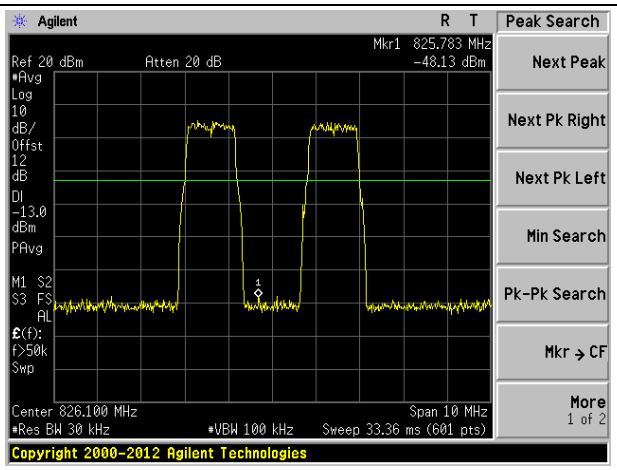
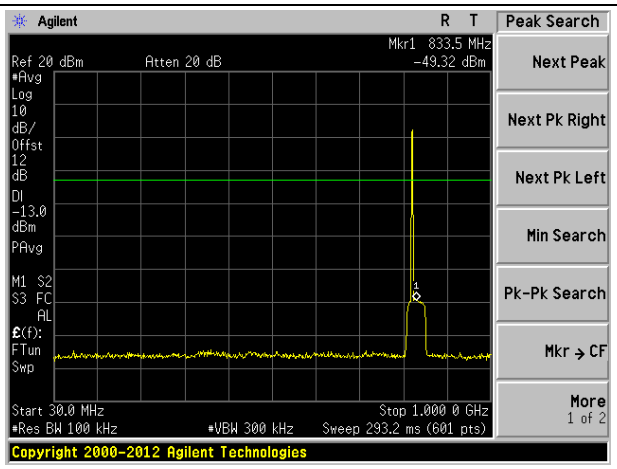
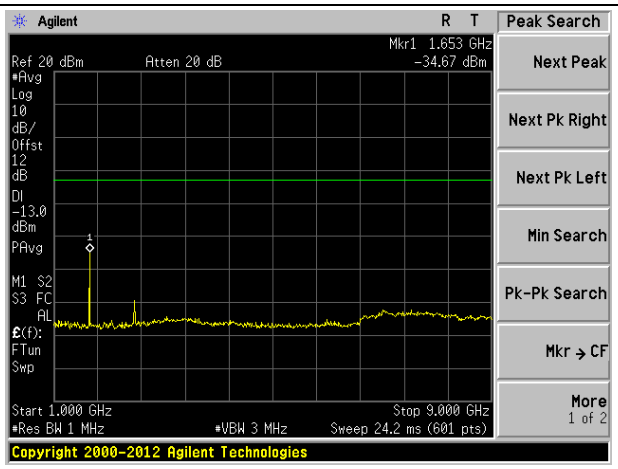
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


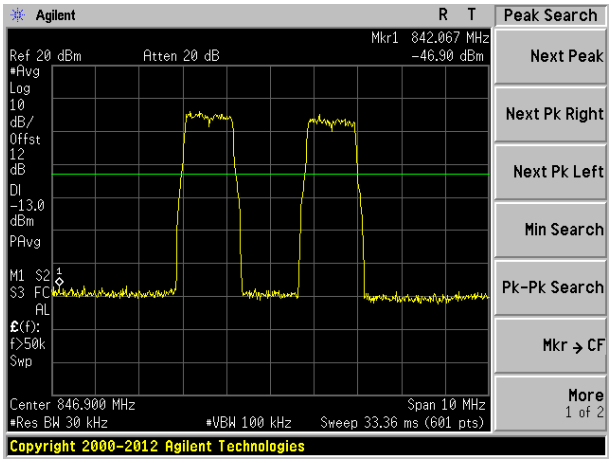
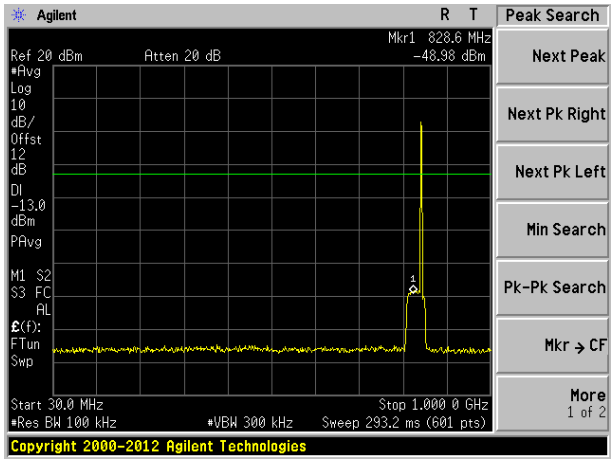
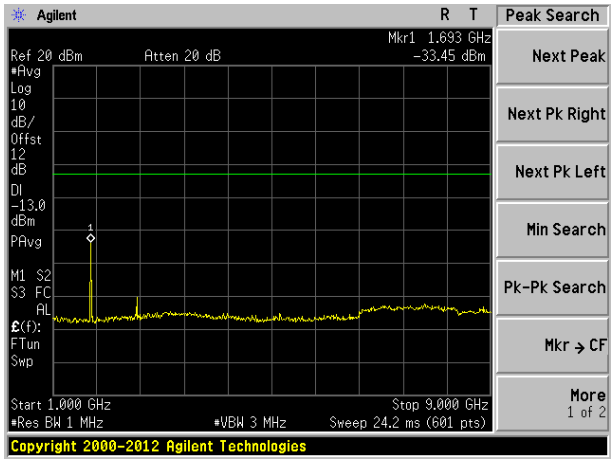
Intermodulation of WCDMA

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


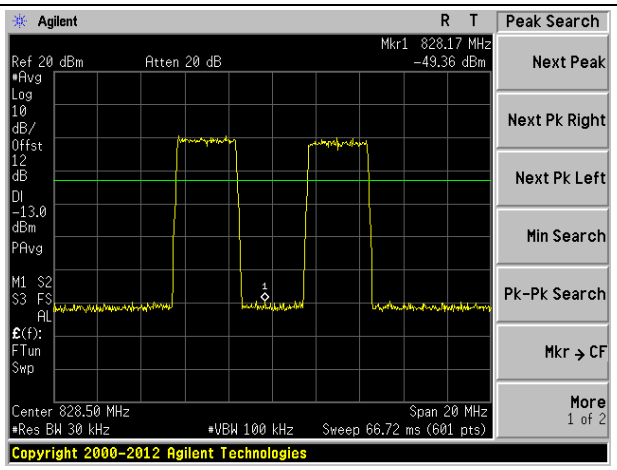
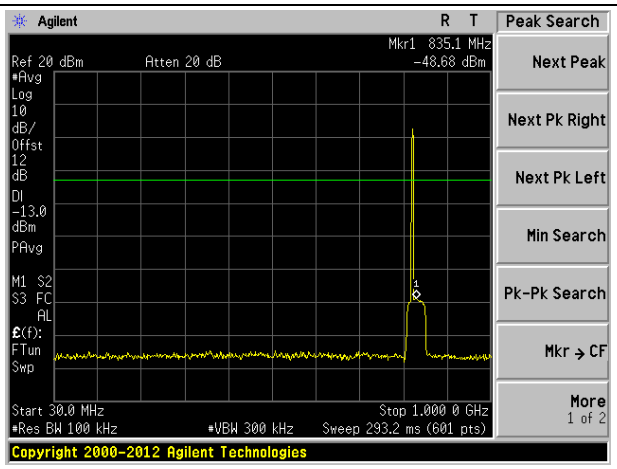
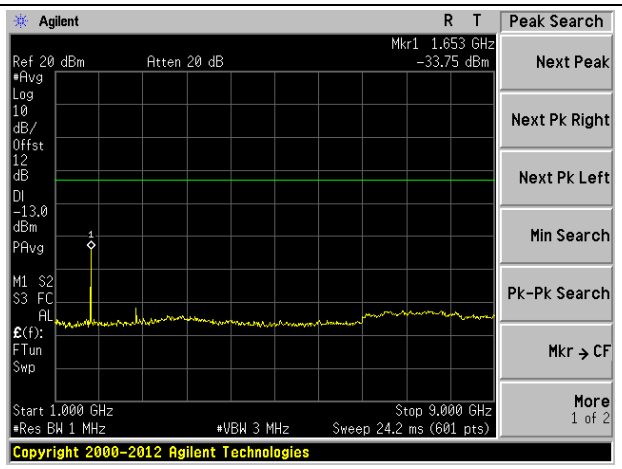
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


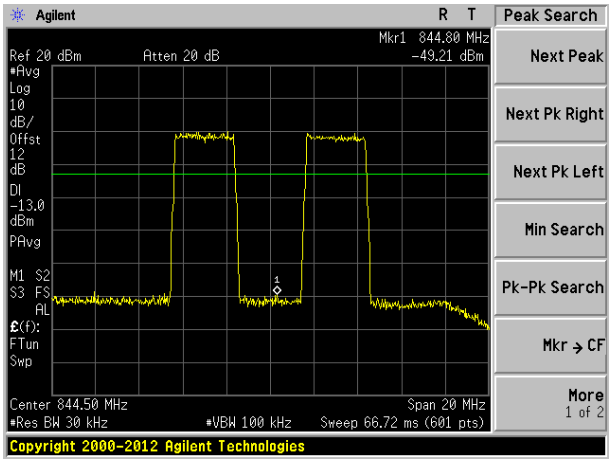
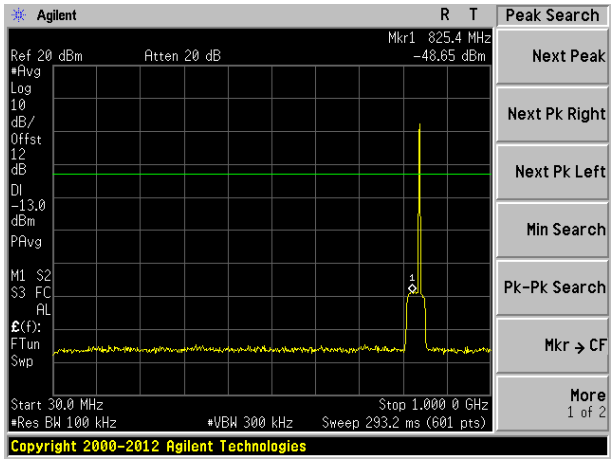
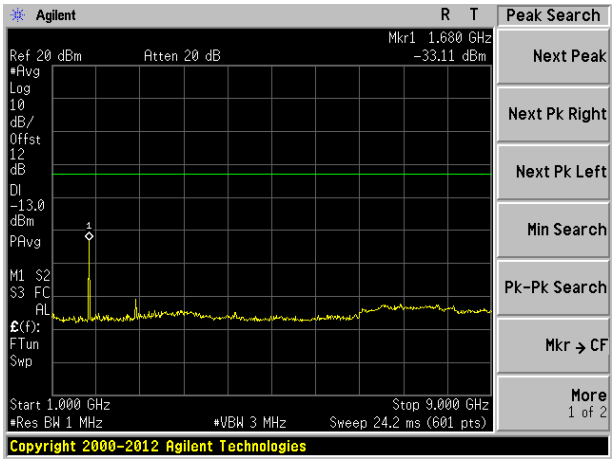
Intermodulation of LTE 1.4MHz Bandwidth

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


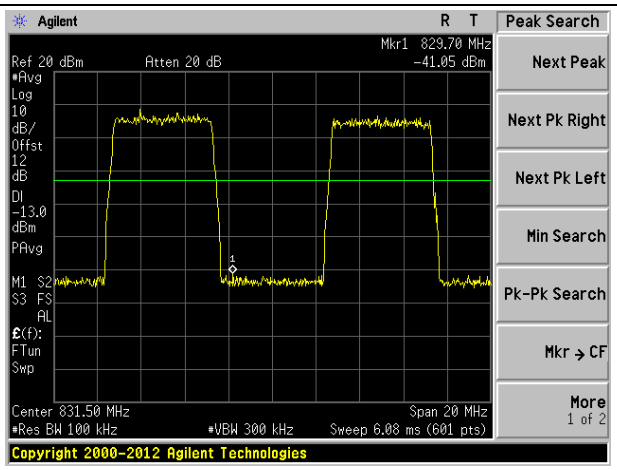
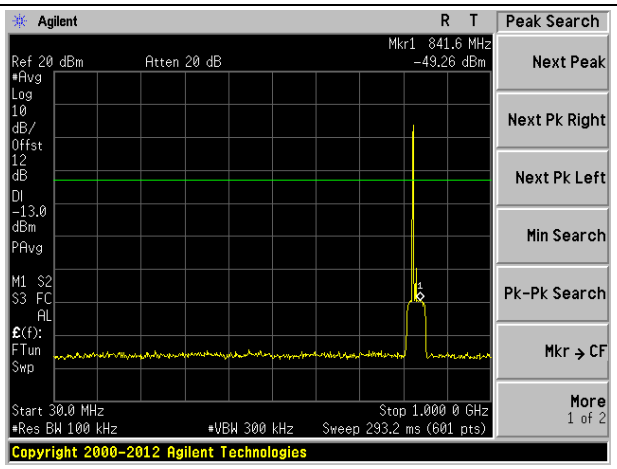
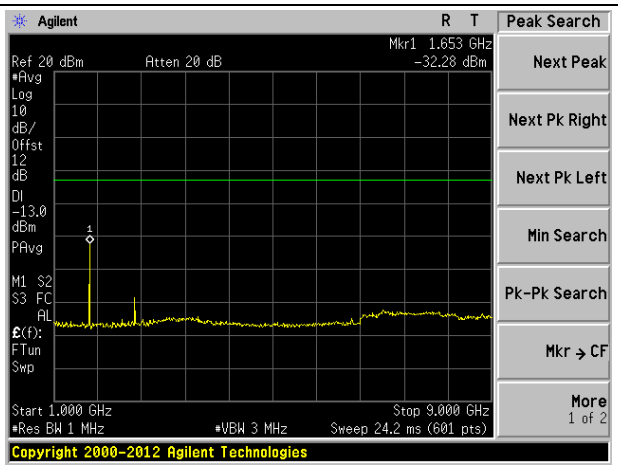
Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


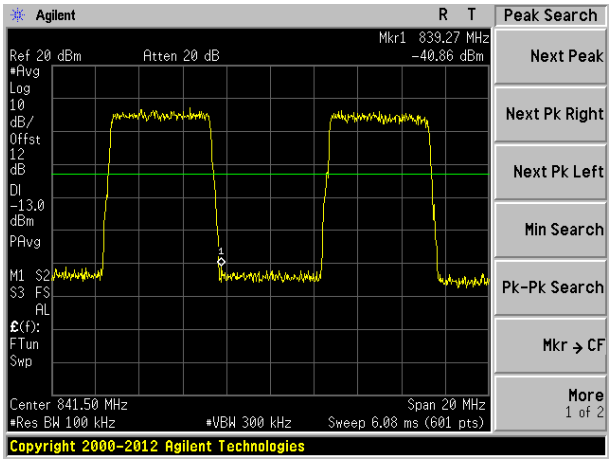
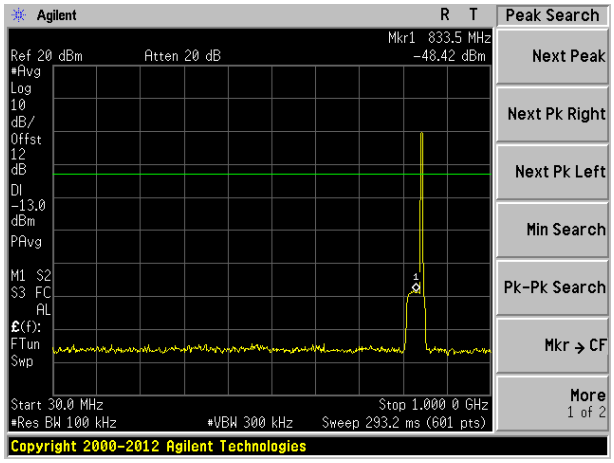
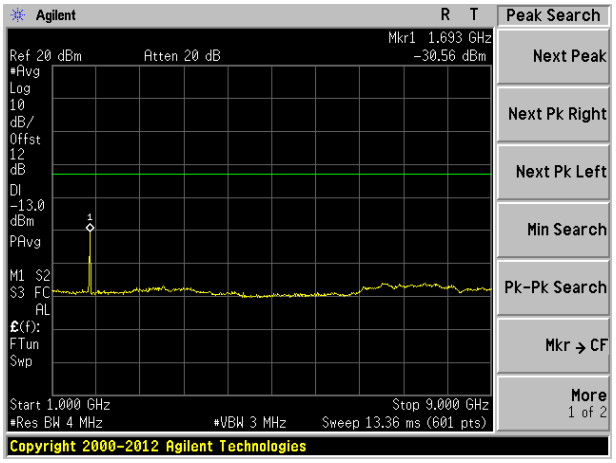
Intermodulation of LTE 3MHz Bandwidth

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


Intermodulation of LTE 5MHz Bandwidth

Intermodulation - Low part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


Intermodulation - High part of band

30MHz-1000MHz spurious emissions

1000MHz-9000MHz spurious emissions


12 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

12.1 Standard Applicable

According to FCC § 2.1053 and § 22.917(a).

12.2 EUT Setup (Block Diagram of Configuration)

Please refer the section §6.2 Configuration of Tested System.

12.3 Measurement Procedure

1. The EUT RF output port was connected to 50 ohm RF load.
2. The EUT input port was connected to signal generator and was setup to transmit maximum power.
3. The measurement antenna was placed at a distance of 3 meters from the EUT.
4. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from EUT.
5. The frequency range up to 10-th harmonic of each of the three fundamental frequencies (low, middle and high channels) was investigated. The worst case of emissions was reported.
6. For spurious emissions attenuation, the substitution method was used.
7. The EUT was substituted by a reference antenna (half-wave dipole – below 1 GHz, or Horn antenna – above 1 GHz), connected to a signal generator.
8. The signal generator output level was adjusted to obtain the same reading as from EUT. The EIRP at the spurious emissions frequency was calculated as follows:

   EIRP = S.G. output (dBm) + Antenna Gain(dBi) – Cable Loss (dB)
9. The antenna substitution method is used to determine the equivalent radiated power at spurious frequencies. The spurious emissions are measured at a distance of 3 meters. The EUT is then replaced with a reference substitution antenna with a known gain referenced to a dipole. This antenna is fed with a signal at the spurious frequency. The level of the signal is adjusted to repeat the previously measured level. The resulting eirp is the signal level fed to the reference antenna corrected for gain referenced to an isotropic dipole
10. From KDB (AMPLIFIER, BOOSTER, AND REPEATER REMINDER SHEET): Radiated spurs (enclosure) – Use of CW signal (low, mid. and high freq.) is acceptable rather than all modulations.
11. The maximum RFI field strength was determined during the measurement by rotating the turntable (±180 degrees) and varying the height of the receive antenna (h = 1 ... 4 m) as like defined in ANSI C63.4. A measurement receiver has been used with a RBW 120 kHz up to 1 GHz and 1 MHz above 1 GHz. Steps with during pre measurement was half the RBW.
12. Both, the Fully Anechoic Chamber (FAC) and the Semi Anechoic Chamber (SAC) fulfil the requirements of ANSI C63.4 and CISPR 16-1-4 with regards to NSA and SVSWR.

12.4 Measurement data

Downlink mode

Test mode:	Below 1G		Test channel:	Lowest channel
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
45.95	Vertical	-44.79	-13.00	Pass
68.45	V	-45.07		
183.56	V	-44.33		
285.53	V	-48.79		
375.14	V	---		
592.33	V	---		
37.51	Horizontal	-47.24	-13.00	Pass
127.56	H	-45.75		
183.45	H	-42.29		
277.55	H	-48.37		
396.56	H	---		
528.96	H	---		
Test mode:	**Above 1G**		**Test channel:**	**Lowest channel**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1575.00	Vertical	-54.35	-13.00	Pass
2769.00	V	-55.27		
3571.00	V	-54.33		
5724.00	V	---		
8922.00	V	---		
2467.00	Horizontal	-55.03	-13.00	Pass
3375.00	H	-54.81		
4724.00	H	-56.75		
5237.00	H	---		
8219.00	H	---		

Test mode:	Below 1G		Test channel:	Middle channel
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
45.53	Vertical	-43.54	-13.00	Pass
99.86	V	-45.79		
245.71	V	-43.34		
385.41	V	-41.57		
595.26	V	---		
654.50	V	---		
35.69	Horizontal	-43.75	-13.00	Pass
88.59	H	-44.67		
152.71	H	-45.38		
258.24	H	-45.20		
346.95	H	---		
452.17	H	---		
Test mode:	**Above 1G**		**Test channel:**	**Middle channel**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1869.00	Vertical	-53.43	-13.00	Pass
2758.00	V	-56.75		
4637.00	V	-54.60		
6245.00	V	---		
8309.00	V	---		
2758.00	Horizontal	-57.71	-13.00	Pass
3751.00	H	-55.22		
5327.00	H	-54.86		
6951.00	H	---		
8467.00	H	---		

Test mode:	Below 1G		Test channel:	Highest channel
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
42.86	Vertical	-43.56	-13.00	Pass
135.64	V	-46.27		
245.01	V	-45.33		
395.75	V	-44.85		
468.53	V	---		
657.14	V	---		
35.26	Horizontal	-43.46	-13.00	Pass
89.41	H	-45.30		
153.47	H	-45.17		
267.58	H	-42.79		
397.40	H	---		
654.55	H	---		
Test mode:	**Above 1G**		**Test channel:**	**Highest channel**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
2453.00	Vertical	-52.49	-13.00	Pass
3751.00	V	-54.33		
4689.00	V	-53.47		
6347.00	V	---		
7937.00	V	---		
1864.00	Horizontal	-53.10	-13.00	Pass
3586.00	H	-55.41		
5749.00	H	-52.52		
7275.00	H	---		
8387.00	H	---		

Remark:
1. Remark”---“ means that the emission level is too low to be measured

Uplink mode

Test mode:	Below 1G		Test channel:	Lowest channel
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
38.71	Vertical	-43.79	-13.00	Pass
108.66	V	-45.07		
245.75	V	-44.48		
384.50	V	-46.25		
465.17	V	---		
579.58	V	---		
42.35	Horizontal	-45.15	-13.00	Pass
117.24	H	-44.37		
243.75	H	-43.58		
462.33	H	-45.10		
586.07	H	---		
675.19		---		
Test mode:	**Above 1G)**		**Test channel:**	**Lowest channel**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1578.00	Vertical	-55.49	-13.00	Pass
2759.00	V	-53.37		
4287.00	V	-55.24		
6375.00	V	---		
7966.00	V	---		
2475.00	Horizontal	-53.33	-13.00	Pass
3865.00	H	-55.67		
4955.00	H	-55.15		
6798.00	H	---		
8274.00	H	---		

Test mode:	Below 1G		Test channel:	Middle channel
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
45.69	Vertical	-45.33	-13.00	Pass
134.27	V	-44.76		
237.82	V	-44.44		
356.51	V	-45.29		
469.57	V	---		
538.14	V	---		
35.33	Horizontal	-43.27	-13.00	Pass
139.45	H	-45.48		
215.47	H	-43.38		
356.74	H	-44.70		
498.50	H	---		
654.28	H	---		
Test mode:	**Aabove 1G**		**Test channel:**	**Middle channel**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
2756.00	Vertical	-56.37	-13.00	Pass
3769.00	V	-57.21		
5367.00	V	-55.89		
7432.00	V	---		
8517.00	V	---		
1589.00	Horizontal	-54.37	-13.00	Pass
3567.00	H	-55.46		
4992.00	H	-56.58		
7207.00	H	---		
8394.00	H	---		

Test mode:	Below 1G		Test channel:	Highest channel
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
39.85	Vertical	-43.67	-13.00	Pass
139.28	V	-45.33		
197.47	V	-45.48		
286.39	V	-44.08		
398.53	V	---		
467.27	V	---		
53.76	Horizontal	-43.52	-13.00	Pass
124.75	H	-46.31		
246.99	H	-44.67		
389.17	H	-43.38		
538.28	H	---		
646.90	H	---		
Test mode:	**Above 1G**		**Test channel:**	**Highest channel**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
2161.00	Vertical	-53.73	-13.00	Pass
3865.00	V	-55.21		
4968.00	V	-54.47		
5312.00	V	---		
7951.00	V	---		
1864.00	Horizontal	-55.39	-13.00	Pass
2968.00	H	-53.23		
4658.00	H	-54.25		
6539.00	H	---		
8301.00	H	---		

Remark:
1. Remark”---“ means that the emission level is too low to be measured

13 FREQUENCY STABILITY

13.1 Standard Applicable

According to FCC § 2.1055 and § 22.355

13.2 Test setup

Please refer the section §6.2 Configuration of Tested System.

13.3 Test Procedure

1. The EUT was placed inside the temperature chamber.
2. The RF output port was connected to a spectrum analyzer.
3. The level of RF input signal shall be increased, until the maximum output power per channel, declared by client, is reached.
4. After the temperature stabilized for approximately 20 min, the transmitting frequency was measured by the spectrum analyzer and recorded.
5. At room temperature, the frequency was measured when EUT was powered with the nominal voltage and with 85% and 115% of the nominal voltage.

13.4 Test Result

Passed.

Downlink:

WCDMA mode					
Reference Frequency: Middle channel=881.6MHz					
Voltage with nominal Voltage	Power Supplied (VAC)	Temperature (℃)	Frequency Error (Hz)	Frequency Error (ppm)	Result
100%	120V	-40	21	0.0238	Passed
100%		-30	19	0.0216	Passed
100%		-20	16	0.0181	Passed
100%		-10	12	0.0136	Passed
100%		0	9	0.0102	Passed
100%		10	8	0.0091	Passed
100%		20	13	0.0147	Passed
100%		30	16	0.0181	Passed
100%		40	15	0.0170	Passed
100%		50	18	0.0204	Passed
100%		55	21	0.0238	Passed
85%	102V	20	19	0.0216	Passed
115%	138V	20	22	0.0250	Passed

Remark: EUT is specified for outdoor use with temperature range of -40° to +55° C, and was tested with its range.

Uplink:

WCDMA mode					
Reference Frequency: Middle channel=836.6MHz					
Voltage with nominal Voltage	Power Supplied (VAC)	Temperature (℃)	Frequency Error (Hz)	Frequency Error (ppm)	Result
100%	120V	-40	21	0.0251	Passed
100%		-30	19	0.0227	Passed
100%		-20	15	0.0179	Passed
100%		-10	11	0.0131	Passed
100%		0	9	0.0108	Passed
100%		10	8	0.0096	Passed
100%		20	14	0.0167	Passed
100%		30	17	0.0203	Passed
100%		40	19	0.0227	Passed
100%		50	21	0.0251	Passed
100%		55	23	0.0275	Passed
85%	102V	20	19	0.0227	Passed
115%	138V	20	21	0.0251	Passed

Remark: EUT is specified for outdoor use with temperature range of -40° to +55° C, and was tested with its range.

14 OUT-OF-BAND REJECTION

14.1 Standard Applicable

According to KDB (AMPLIFIER, BOOSTER, AND REPEATER REMINDER SHEET):

Out of Band Rejection – Test for rejection of out of band signals. Filter freq. response plots are acceptable.

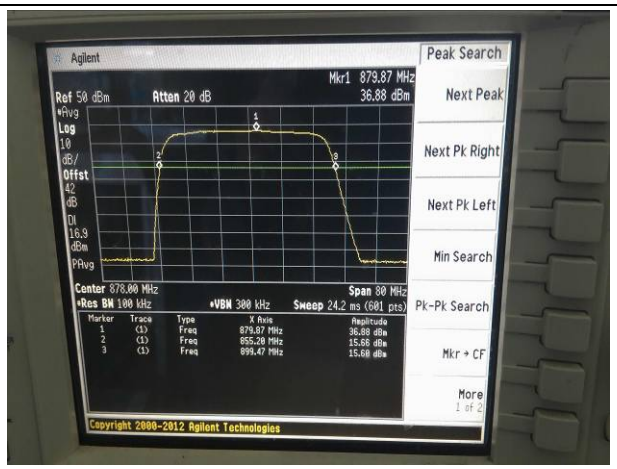
14.2 Test setup

Please refer the section §6.2 Configuration of Tested System.

14.3 Test Procedure

1. The EUT RF output port was connected to spectrum analyzer.
2. The level of RF input signal shall be increased, until the maximum output power per channel, declared by client, is reached.
3. A continuous sinusoidal RF signal shall be fed successively at frequency offsets 100 MHz from the edges of the relevant MS or BTS transmit frequency band into the relevant input port of the repeater.
4. The RF output curve was recorded by spectrum analyzer.

14.4 Test Result

Out-of-Band Rejection	
	
Downlink	Uplink

15 AC POWER LINE CONDUCTED EMISSION TEST

15.1 Standard Applicable

According to FCC §15.207. The emission value for frequency within 150KHz to 30MHz shall not Exceed criteria of below chart.

Frequency range (MHz)	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	79	66
0.50 to 30	73	60
Note 1.The lower limit shall apply at the transition frequencies 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

15.2 Test setup

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.4-2001.
2. The EUT was plug-in DC power adaptort and was placed on the center of the back edge on the test table. The peripherals like earphone was placed on the side of the EUT. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The Power adaptor was connected with 110VAC/60Hz power source.

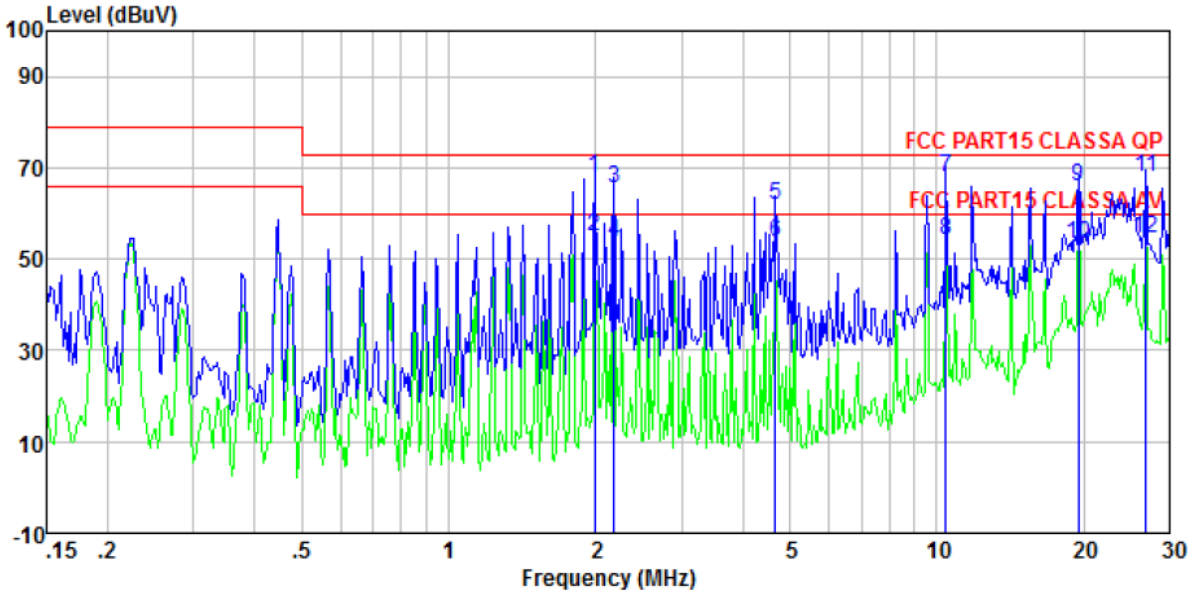
15.3 Test Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

15.4 Measurement Result

Downlink:

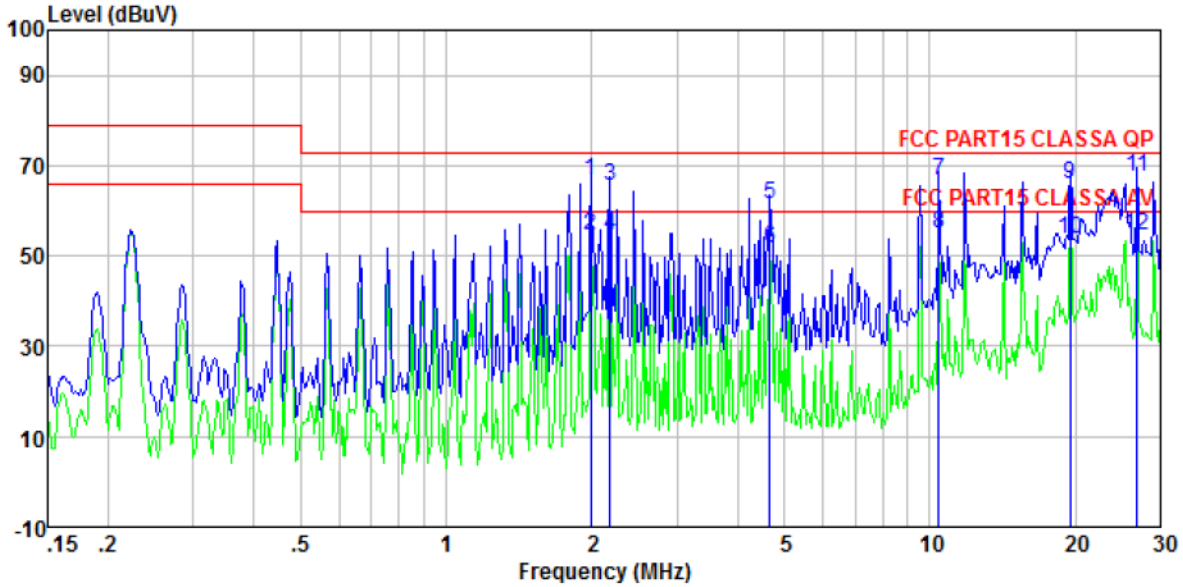
Line:



Site : Shielded room
Condition : FCC PART15 CLASSA QP LISN-2013 LINE
Job No. : 0043
Test mode : Downlink mode
Test Engineer: Sky

	Freq	Read Level	Level	Cable Loss	Aux Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	1.991	67.65	67.92	0.15	0.00	73.00	-5.08	QP
2	1.991	54.58	54.85	0.15	0.00	60.00	-5.15	Average
3	2.178	65.33	65.60	0.15	0.00	73.00	-7.40	QP
4	2.178	53.55	53.82	0.15	0.00	60.00	-6.18	Average
5	4.672	61.33	61.69	0.15	0.00	73.00	-11.31	QP
6	4.672	53.38	53.74	0.15	0.00	60.00	-6.26	Average
7	10.452	67.55	68.04	0.19	0.00	73.00	-4.96	QP
8	10.452	53.83	54.32	0.19	0.00	60.00	-5.68	Average
9	19.532	65.27	66.07	0.22	0.00	73.00	-6.93	QP
10	19.532	52.71	53.51	0.22	0.00	60.00	-6.49	Average
11	26.841	66.50	67.74	0.23	0.00	73.00	-5.26	QP
12	26.841	53.39	54.63	0.23	0.00	60.00	-5.37	Average

Neutral:

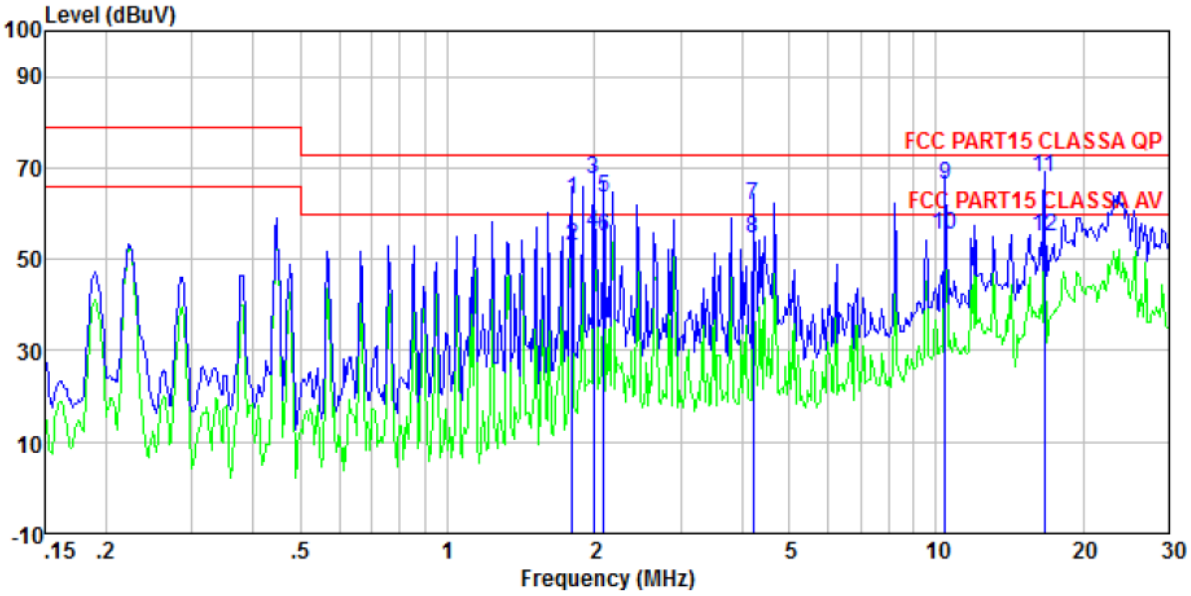


Site : Shielded room
Condition : FCC PART15 CLASSA QP LISN-2013 NEUTRAL
Job No. : 0043
Test mode : Downlink mode
Test Engineer: Sky

	Freq	Read Level	Level	Cable Loss	Aux Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	1.991	66.35	66.59	0.15	0.00	73.00	-6.41	QP
2	1.991	54.20	54.44	0.15	0.00	60.00	-5.56	Average
3	2.178	65.37	65.61	0.15	0.00	73.00	-7.39	QP
4	2.178	54.37	54.61	0.15	0.00	60.00	-5.39	Average
5	4.672	61.32	61.62	0.15	0.00	73.00	-11.38	QP
6	4.672	51.29	51.59	0.15	0.00	60.00	-8.41	Average
7	10.452	66.25	66.69	0.19	0.00	73.00	-6.31	QP
8	10.452	54.50	54.94	0.19	0.00	60.00	-5.06	Average
9	19.532	65.36	66.08	0.22	0.00	73.00	-6.92	QP
10	19.532	52.87	53.59	0.22	0.00	60.00	-6.41	Average
11	26.841	66.21	67.37	0.23	0.00	73.00	-5.63	QP
12	26.841	53.44	54.60	0.23	0.00	60.00	-5.40	Average

Uplink:

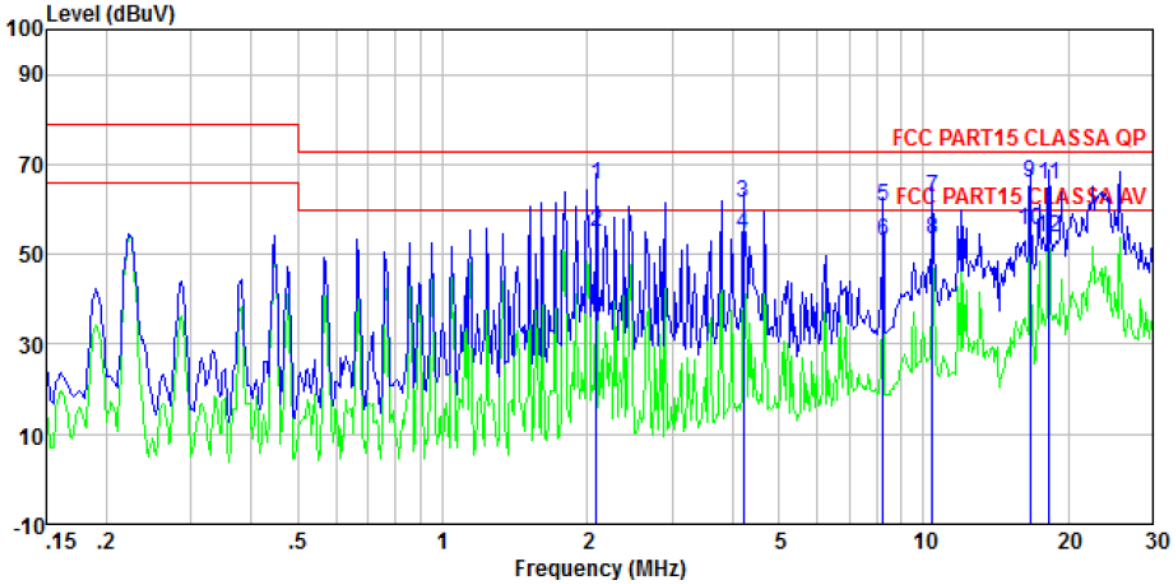
Line:



Site : Shielded room
Condition : FCC PART15 CLASSA QP LISN-2013 LINE
Job No. : 0043
Test mode : Uplink mode
Test Engineer: Sky

	Freq	Read Level	Level	Cable Loss	Aux Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	1.800	62.72	62.98	0.14	0.00	73.00	-10.02	QP
2	1.800	52.78	53.04	0.14	0.00	60.00	-6.96	Average
3	1.991	67.45	67.72	0.15	0.00	73.00	-5.28	QP
4	1.991	55.64	55.91	0.15	0.00	60.00	-4.09	Average
5	2.088	63.32	63.59	0.15	0.00	73.00	-9.41	QP
6	2.088	54.73	55.00	0.15	0.00	60.00	-5.00	Average
7	4.224	61.37	61.72	0.15	0.00	73.00	-11.28	QP
8	4.224	54.07	54.42	0.15	0.00	60.00	-5.58	Average
9	10.452	65.71	66.20	0.19	0.00	73.00	-6.80	QP
10	10.452	54.98	55.47	0.19	0.00	60.00	-4.53	Average
11	16.661	67.12	67.75	0.22	0.00	73.00	-5.25	QP
12	16.661	54.52	55.15	0.22	0.00	60.00	-4.85	Average

Neutral:

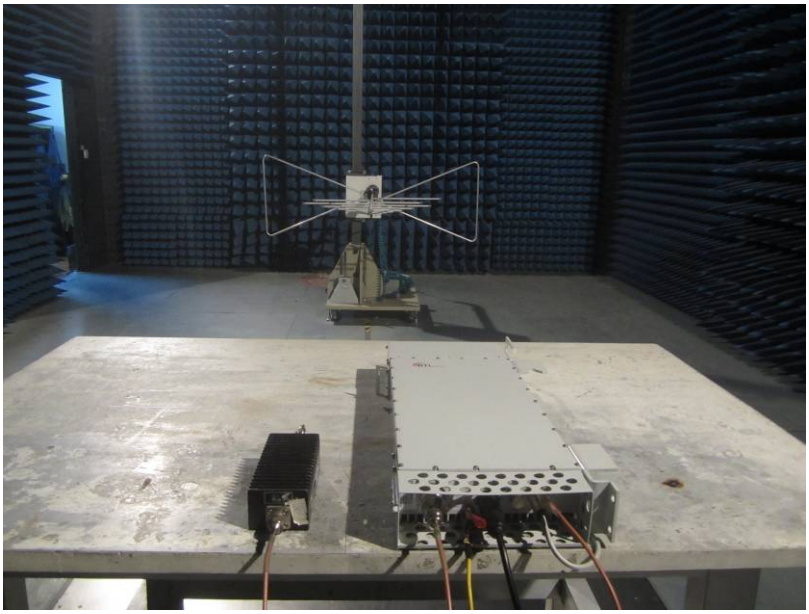


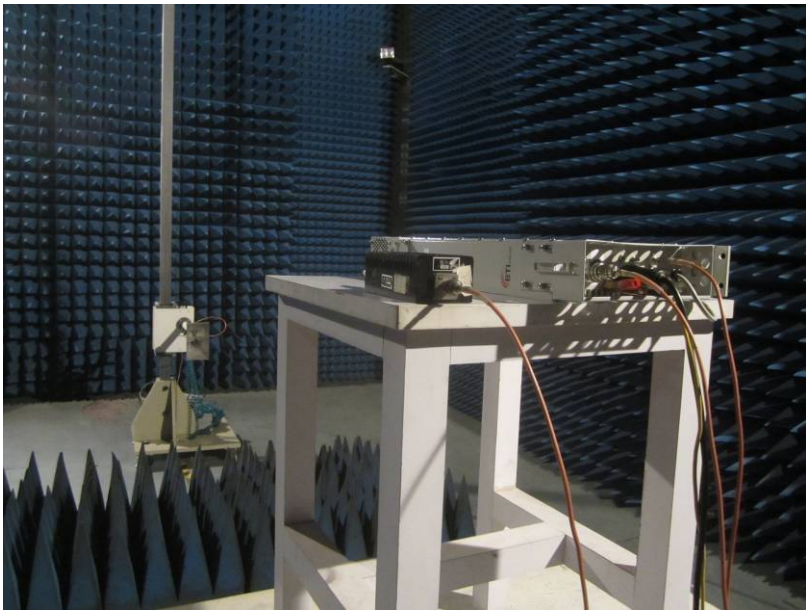
Site : Shielded room
Condition : FCC PART15 CLASSA QP LISN-2013 NEUTRAL
Job No. : 0043
Test mode : Uplink mode
Test Engineer: Sky

	Freq	Read Level	Level	Cable Loss	Aux Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	2.088	65.24	65.48	0.15	0.00	73.00	-7.52	QP
2	2.088	54.56	54.80	0.15	0.00	60.00	-5.20	Average
3	4.224	61.14	61.43	0.15	0.00	73.00	-11.57	QP
4	4.224	54.45	54.74	0.15	0.00	60.00	-5.26	Average
5	8.235	60.07	60.45	0.18	0.00	73.00	-12.55	QP
6	8.235	52.40	52.78	0.18	0.00	60.00	-7.22	Average
7	10.452	62.12	62.56	0.19	0.00	73.00	-10.44	QP
8	10.452	52.72	53.16	0.19	0.00	60.00	-6.84	Average
9	16.661	65.38	65.98	0.22	0.00	73.00	-7.02	QP
10	16.661	54.95	55.55	0.22	0.00	60.00	-4.45	Average
11	18.232	65.02	65.66	0.22	0.00	73.00	-7.34	QP
12	18.232	53.00	53.64	0.22	0.00	60.00	-6.36	Average

16 Test Setup Photo

Radiated Emission

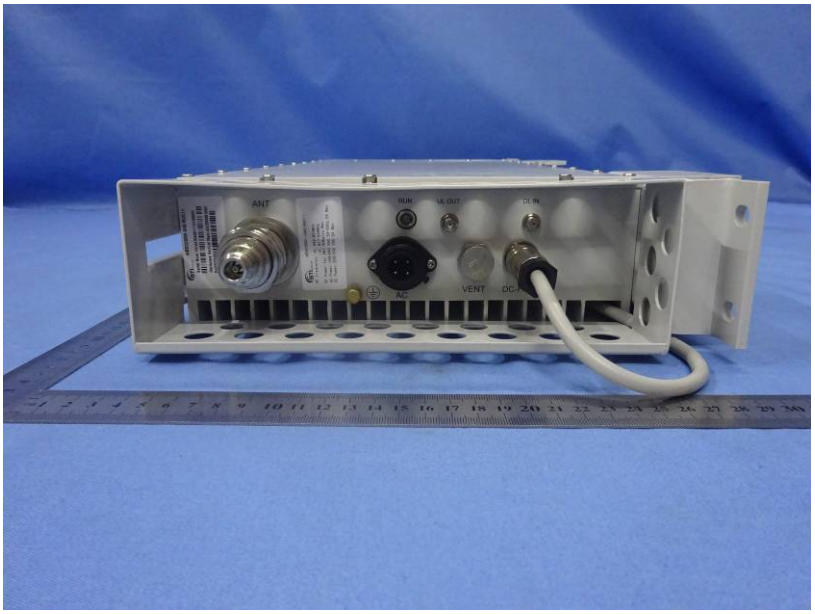




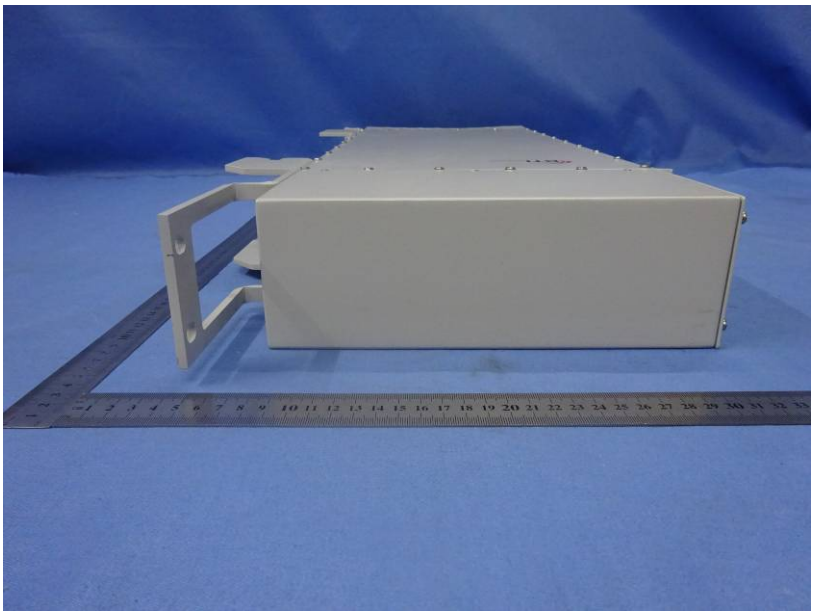
Conducted Emission

17 EUT Constructional Details

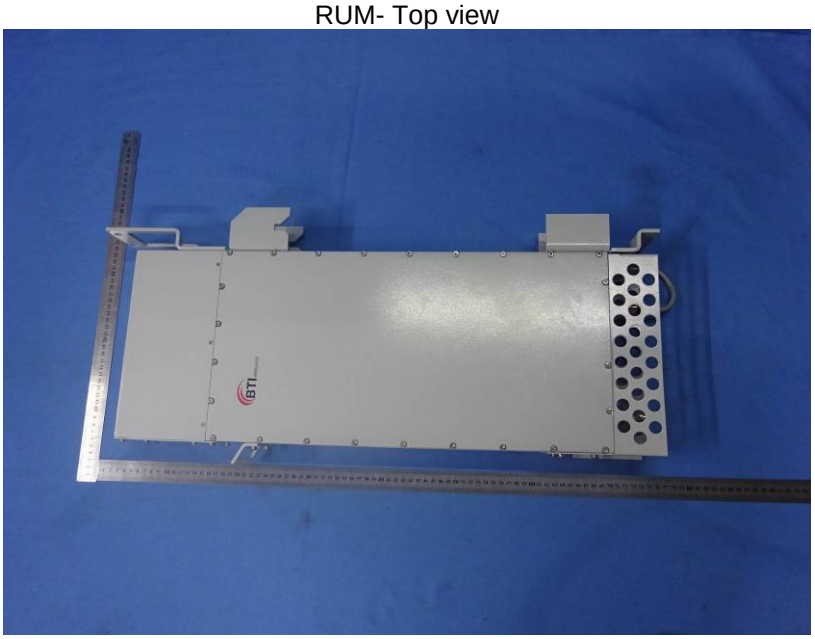
RUM- Front view



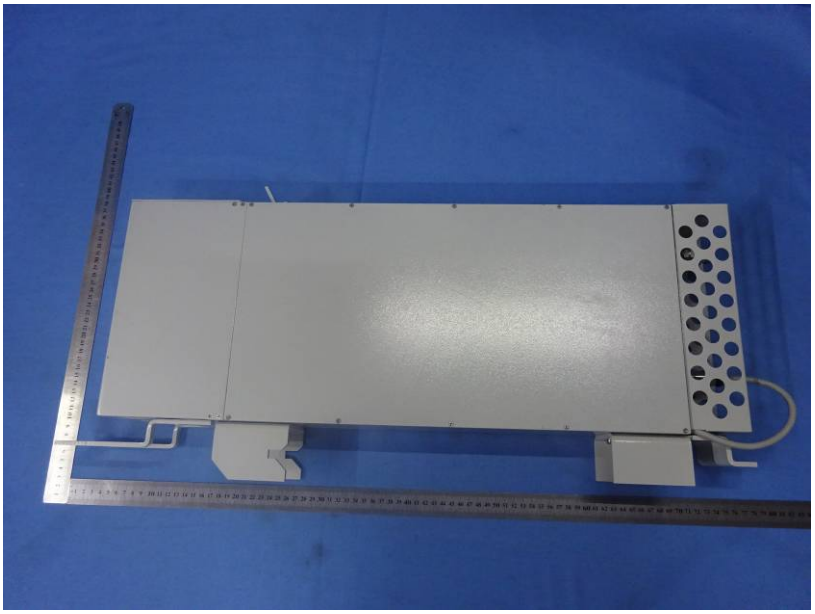
RUM- Rear view



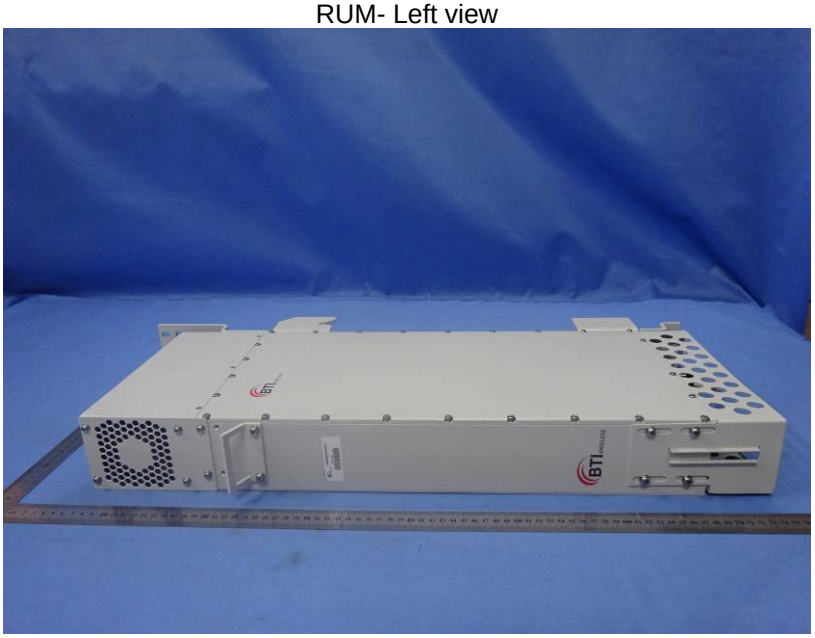
RUM- Top view



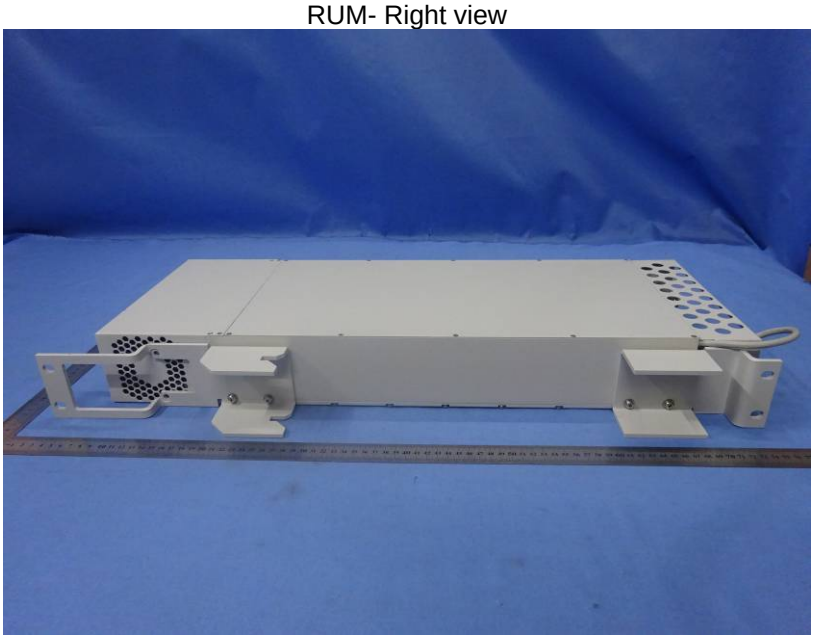
RUM- Bottom view

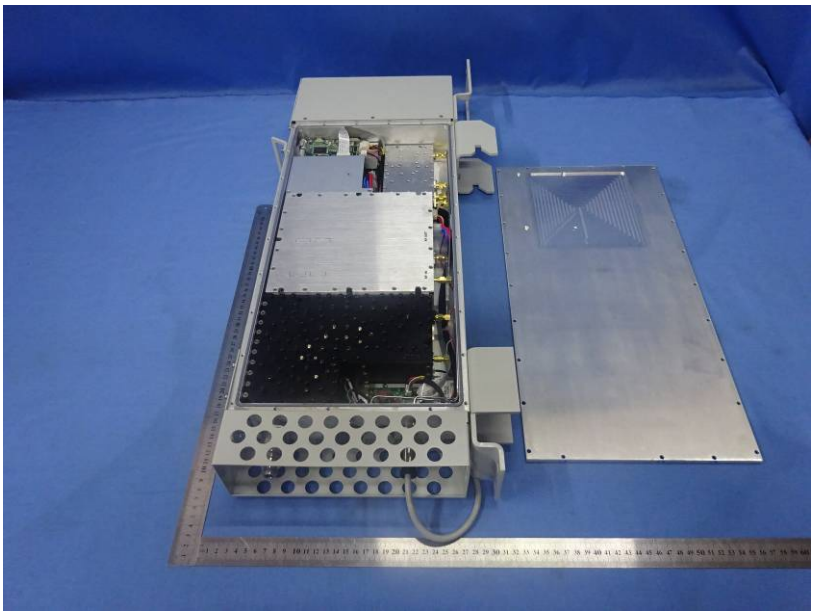


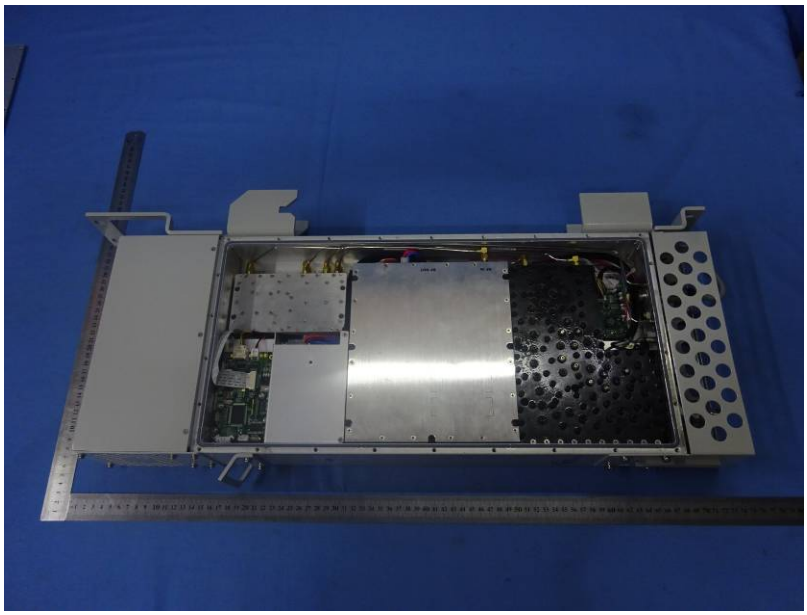
RUM- Left view

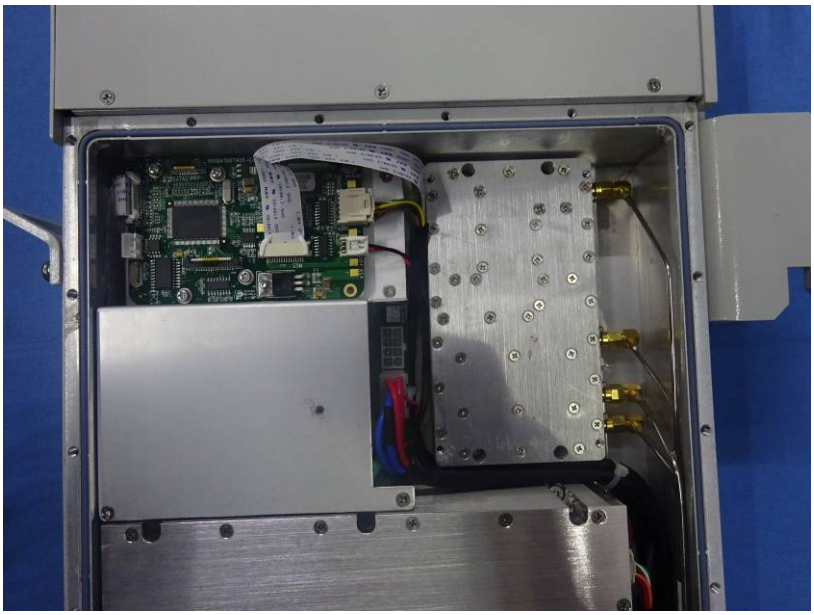


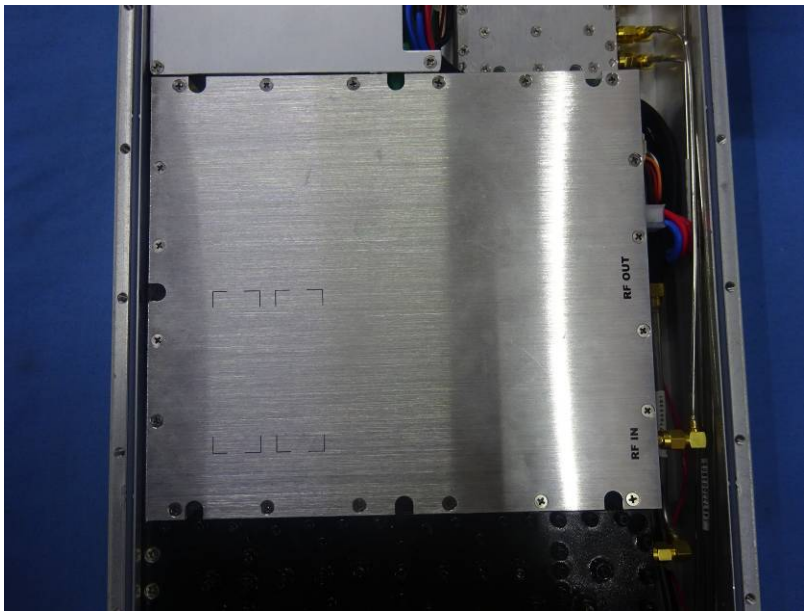
RUM- Right view

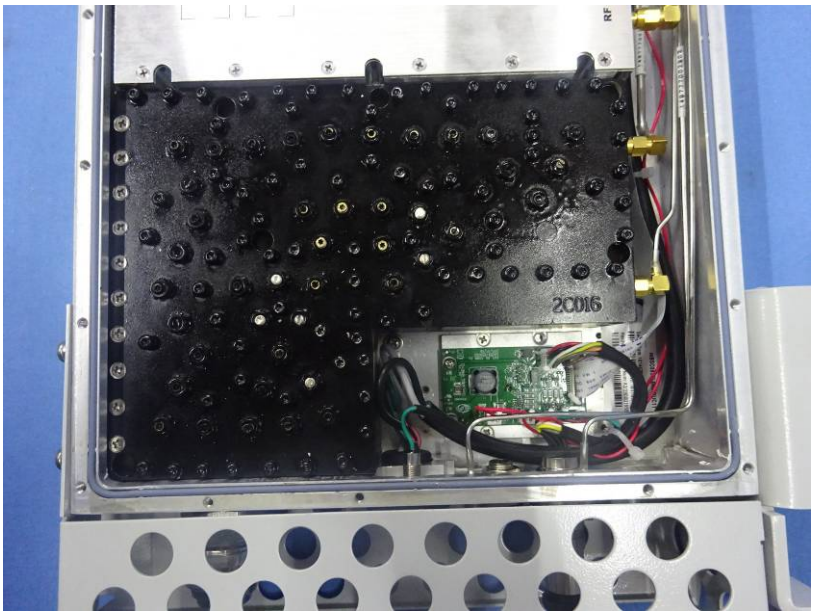




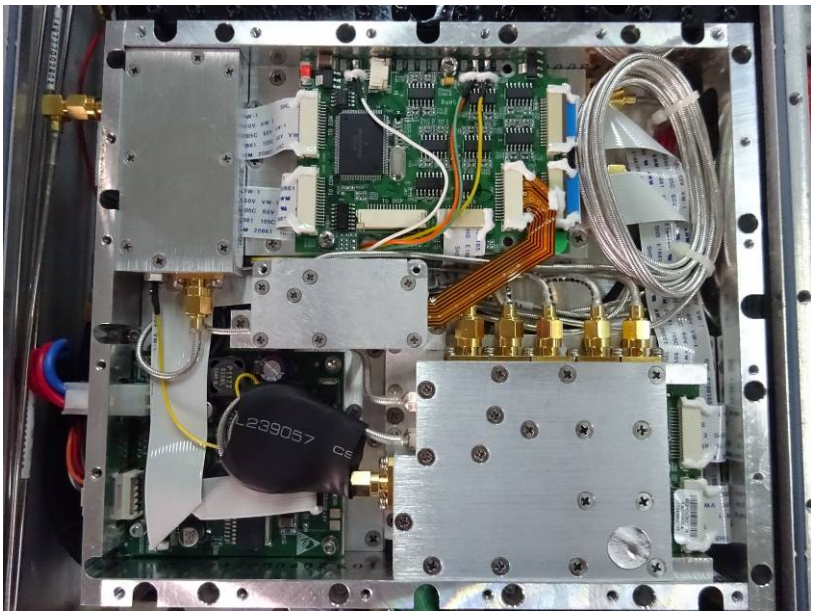


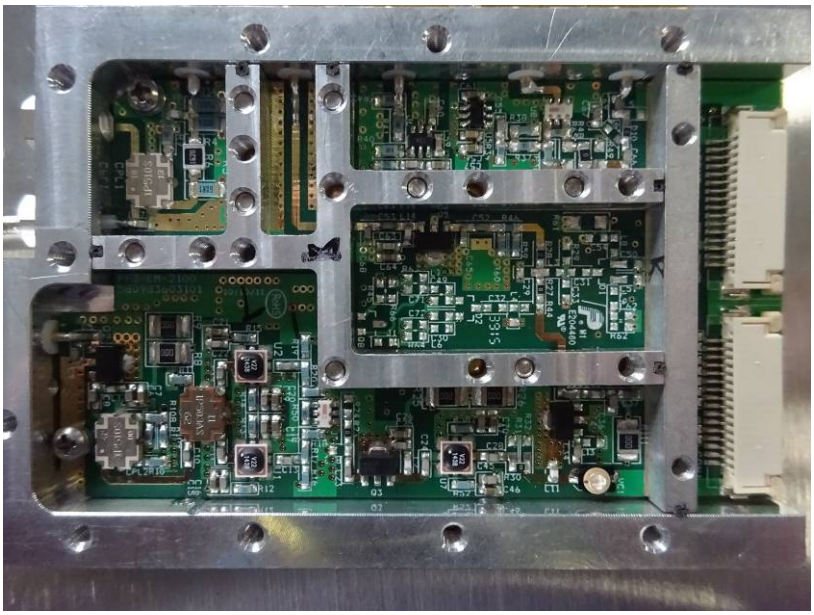


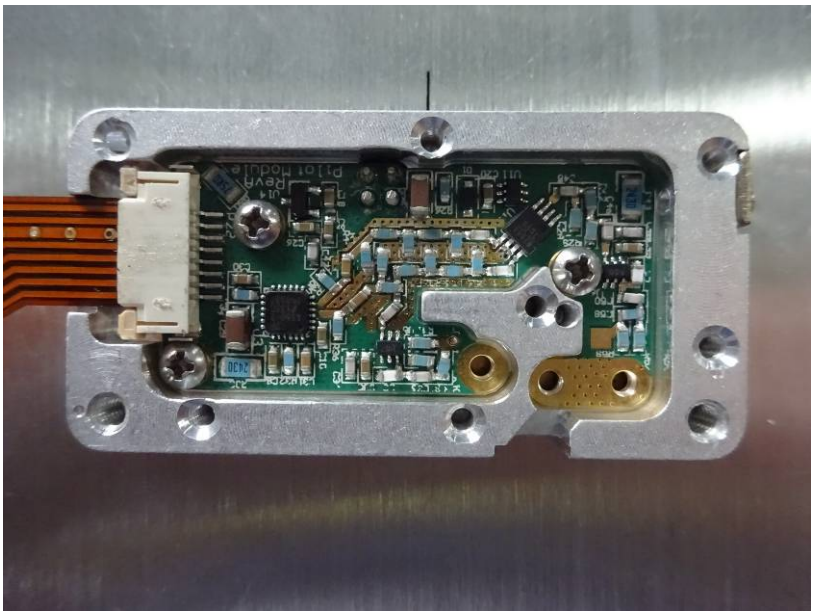

RF OUT
RF IN

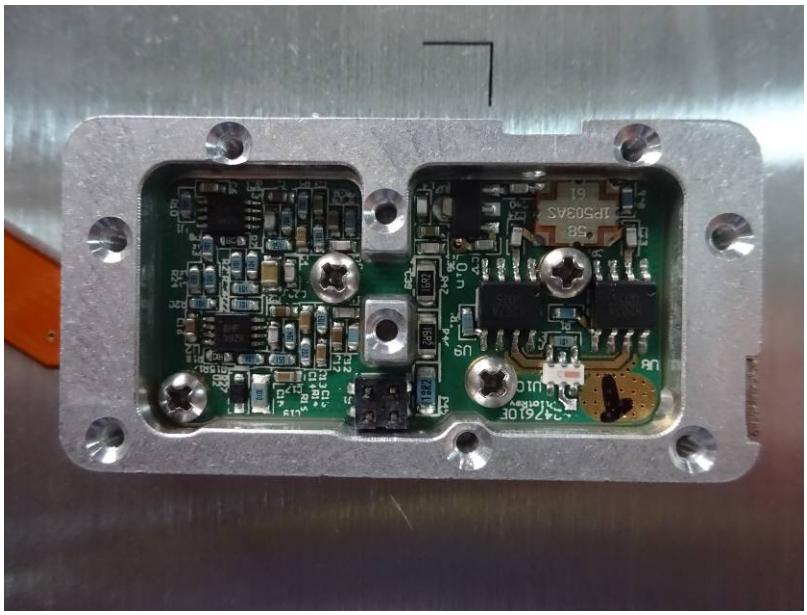

RF
2C016

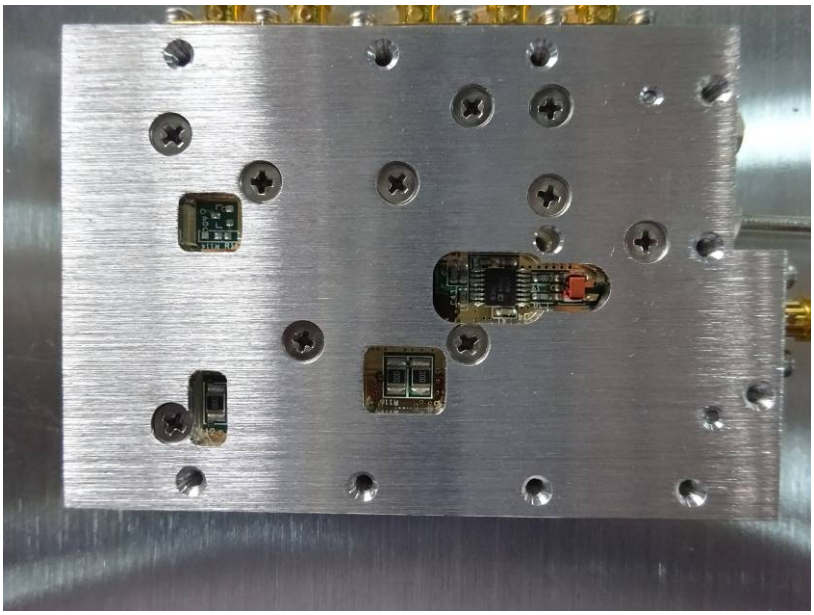

SRP8378N10N32FB
150831
SRP833N10N32FB
150831

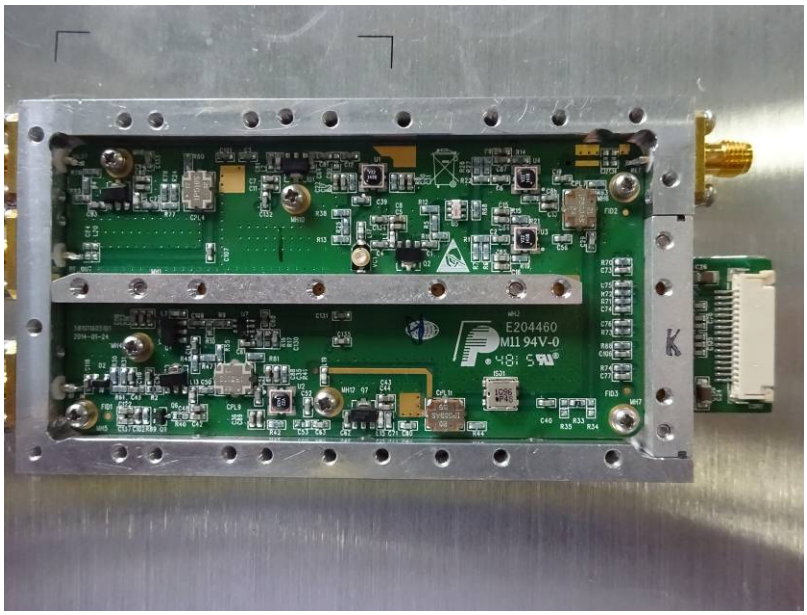




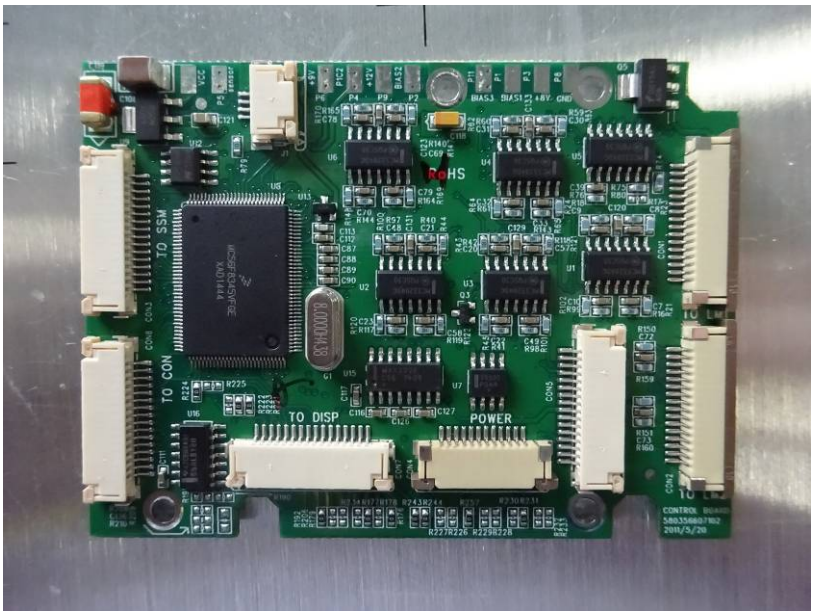


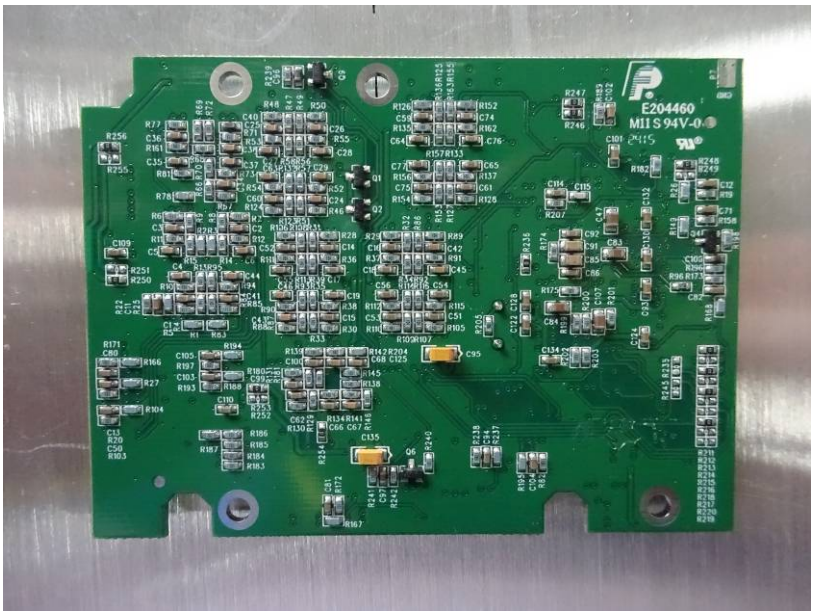




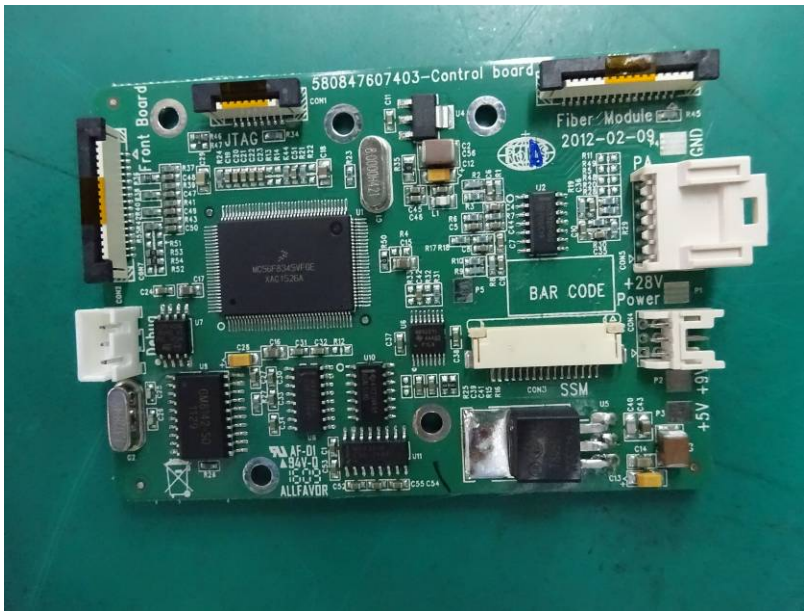

E204460
VM1 94V-0

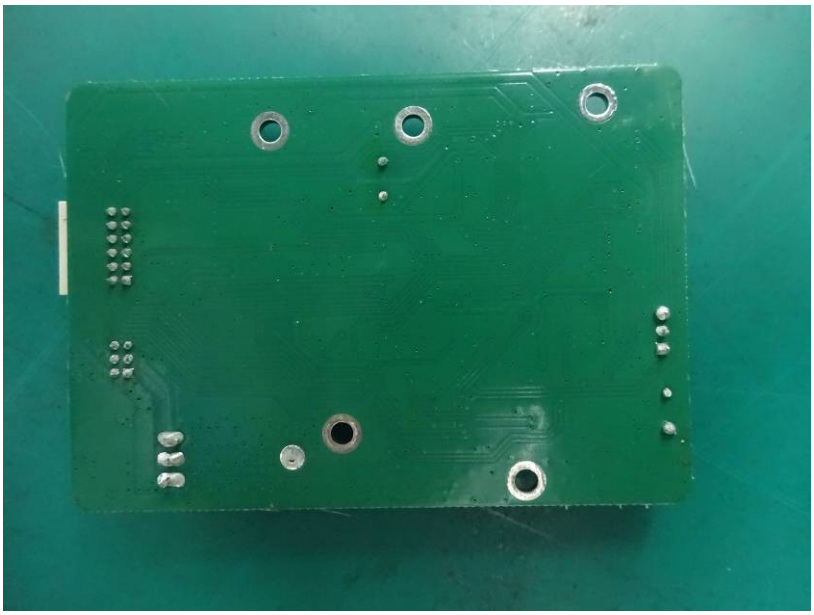

BP34R
881S25B
SSEC

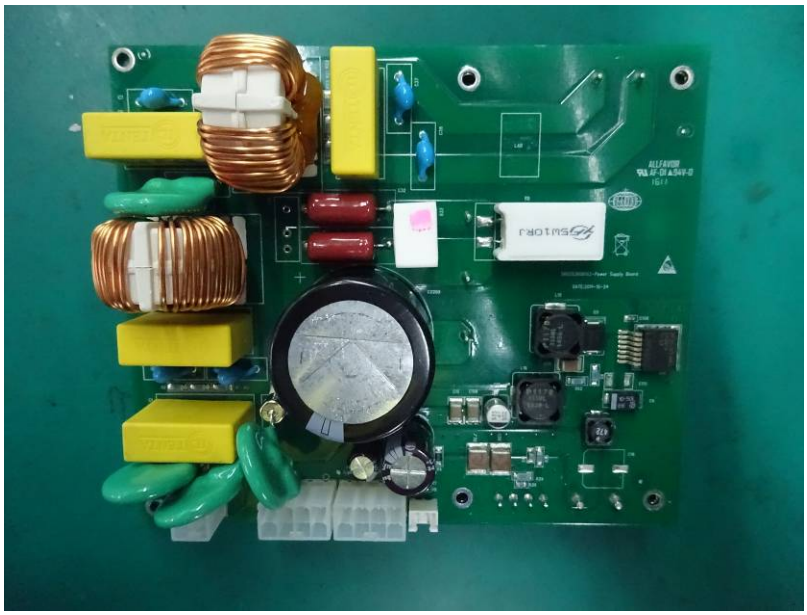

TO SSM
TO CON
TO DISP
POWER

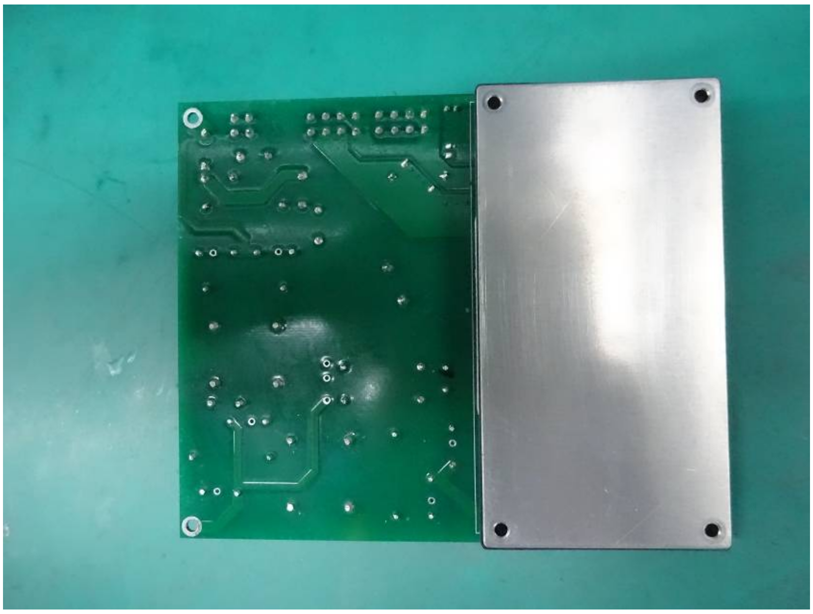

E204460
MII S 94V-0


210356000103

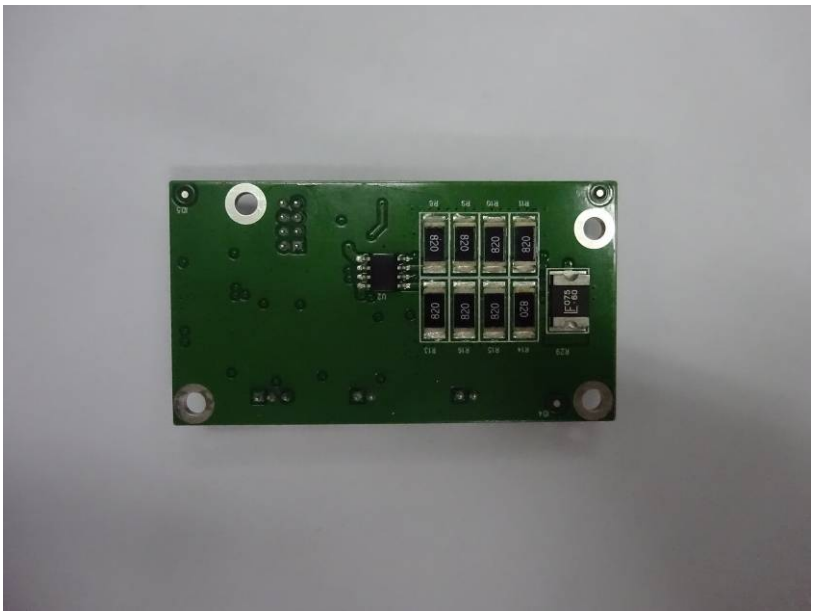

580847607403-Control board
Front Board
JTAG
Fiber Module
2012-02-09
GND
PA
BAR CODE
+28V
Power
SSM
+5V +9V
ALLFAVOR

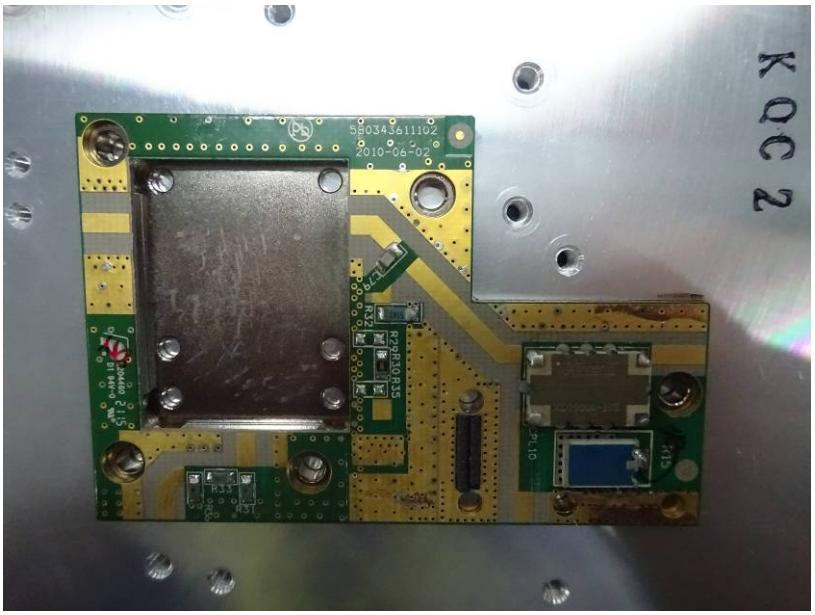







M1
M2
M3
M4
+8V
+30V
DAS RU CONN Bd.
2011/01/06





------end------