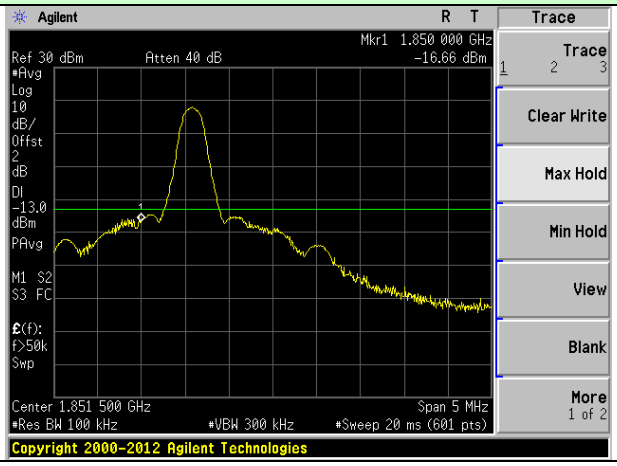
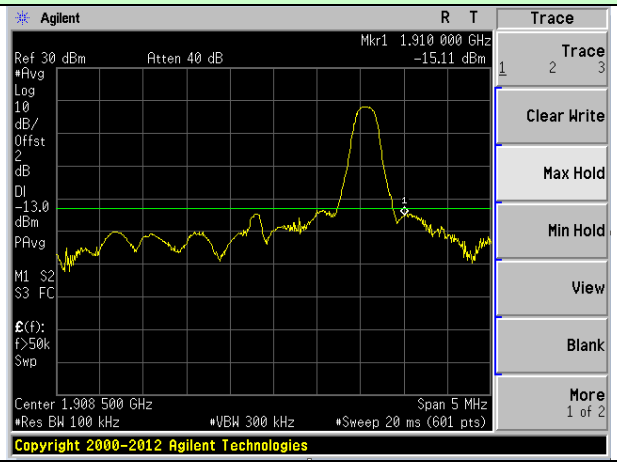
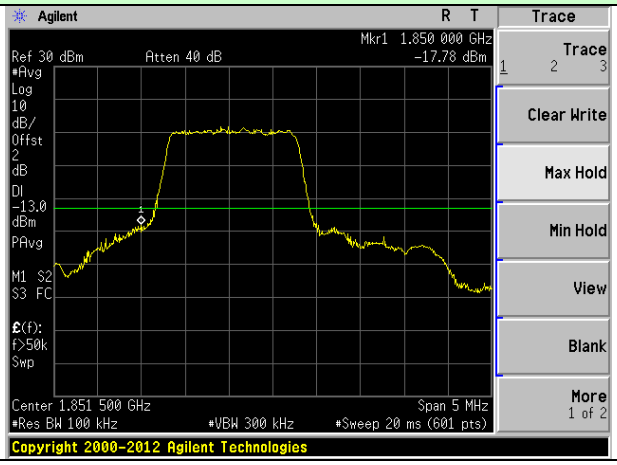
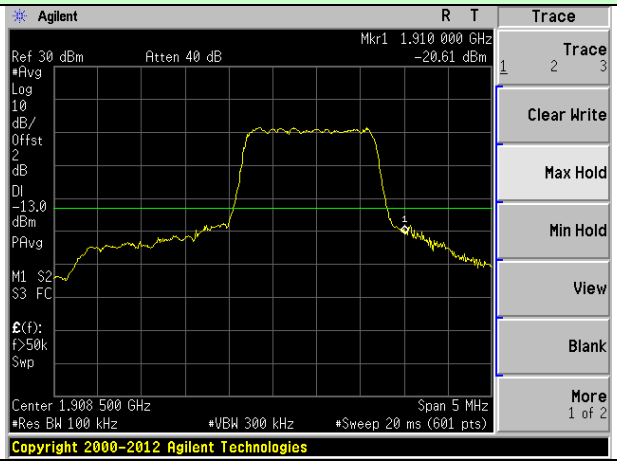
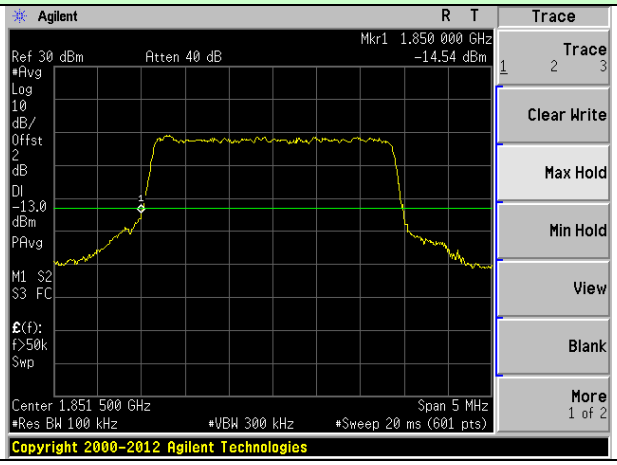
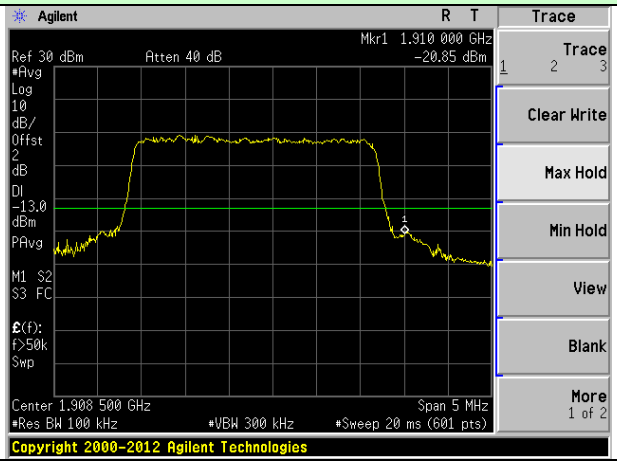
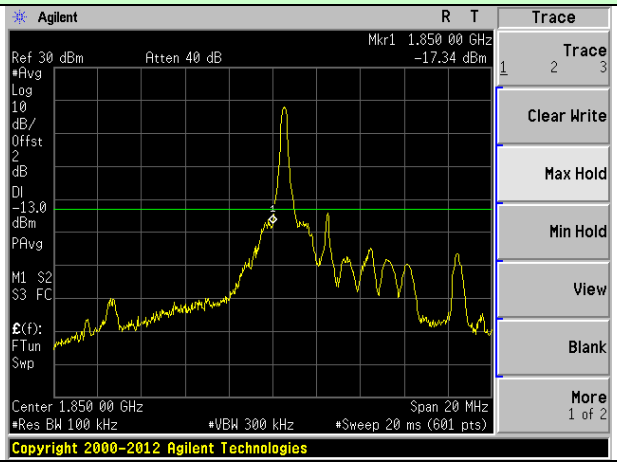
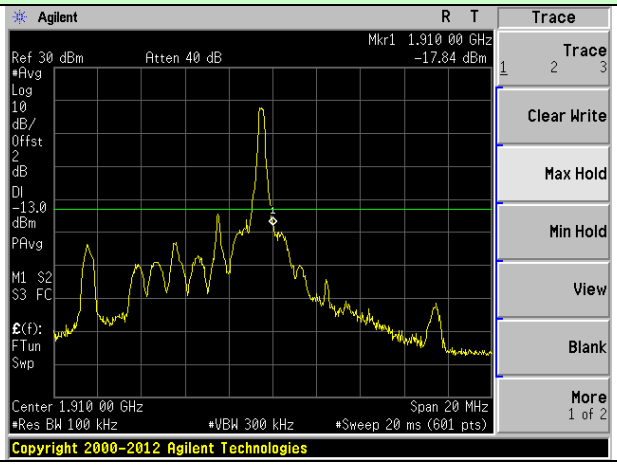
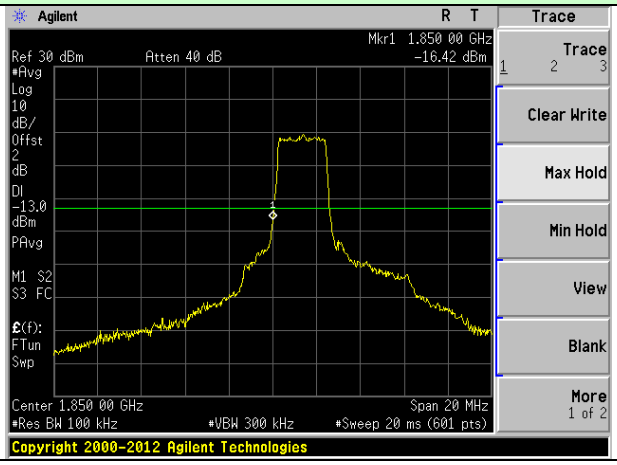
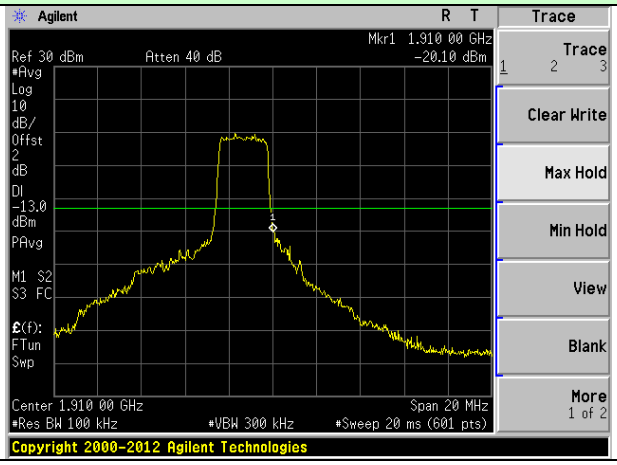
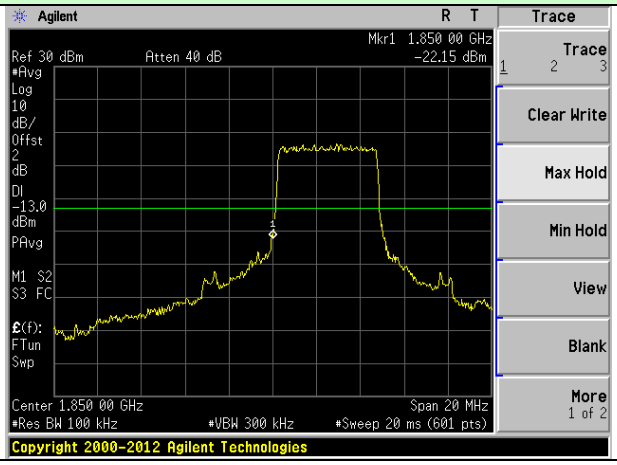
3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:14#)
	
Lowest channel	Highest channel

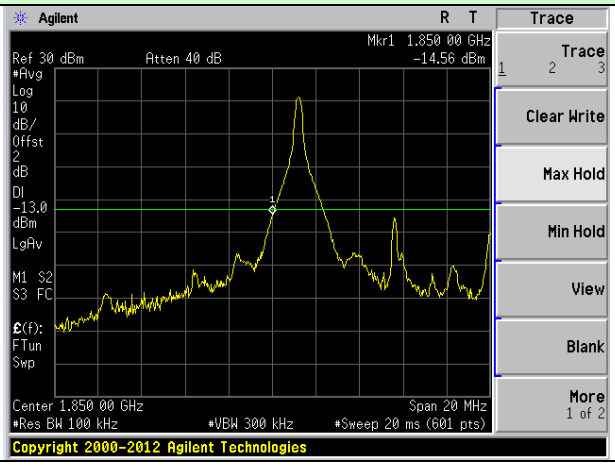
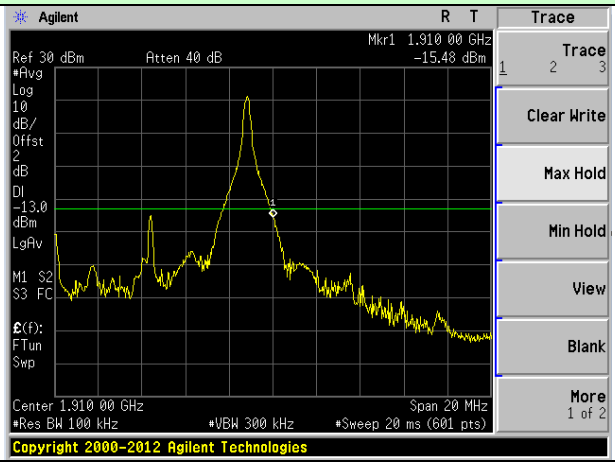
3MHz Bandwidth (RB size:8# RB offset:0#)	3MHz Bandwidth (RB size:8# RB offset:7#)
	
Lowest channel	Highest channel

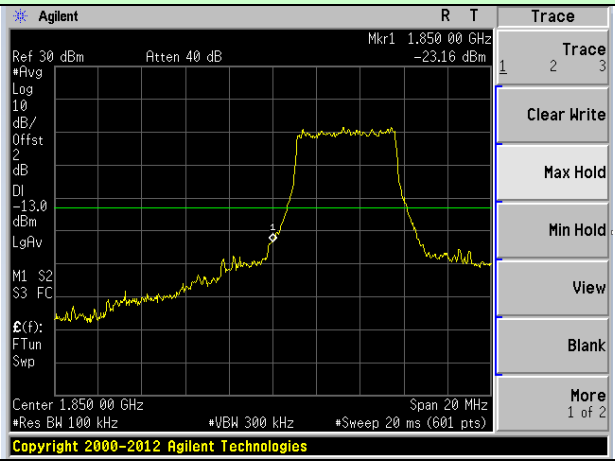
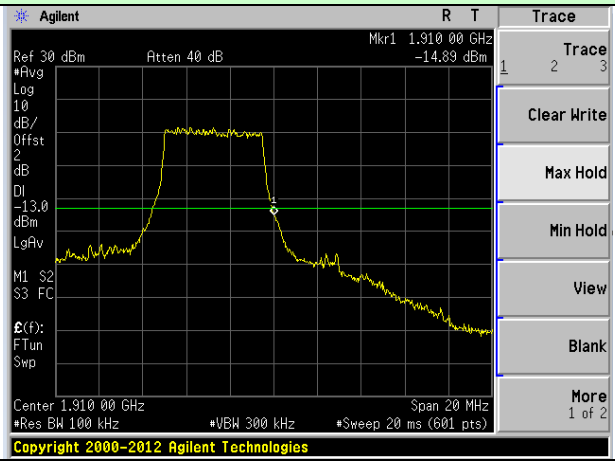
3MHz Bandwidth (RB size:15# RB offset:0#)	3MHz Bandwidth (RB size:15# RB offset:0#)
	
Lowest channel	Highest channel

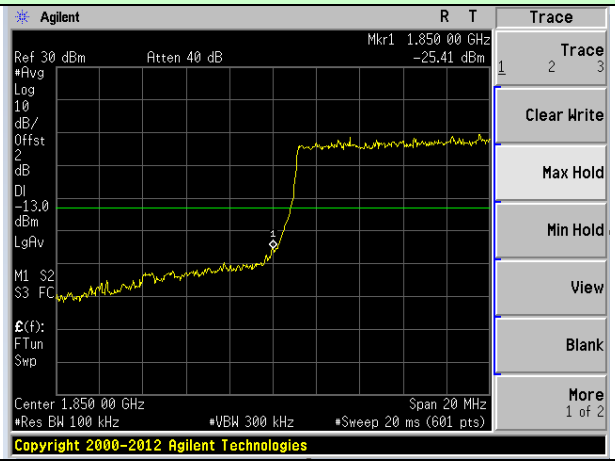
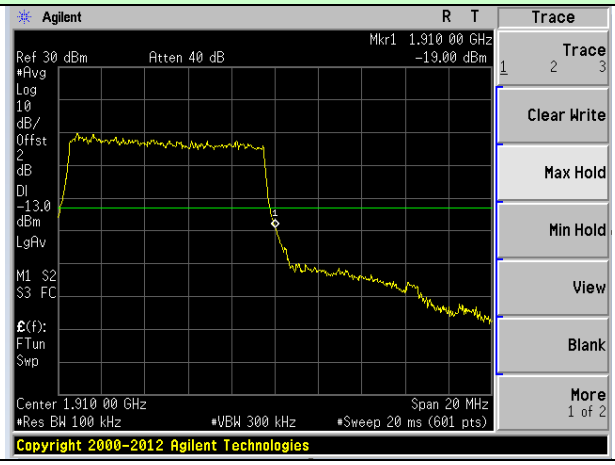
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

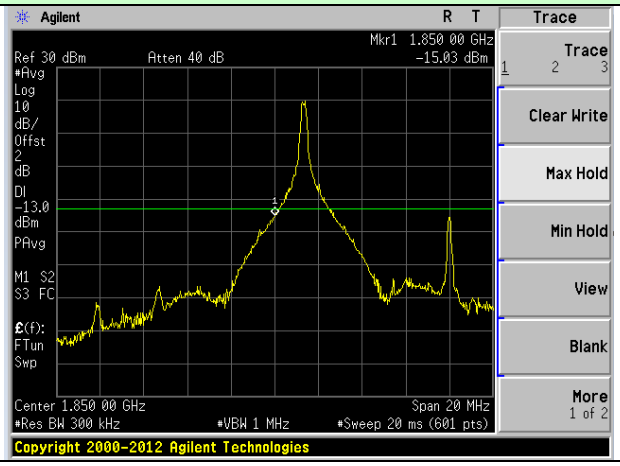
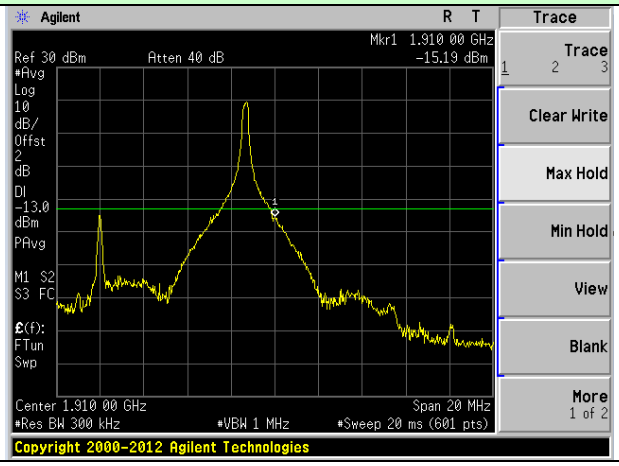
5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

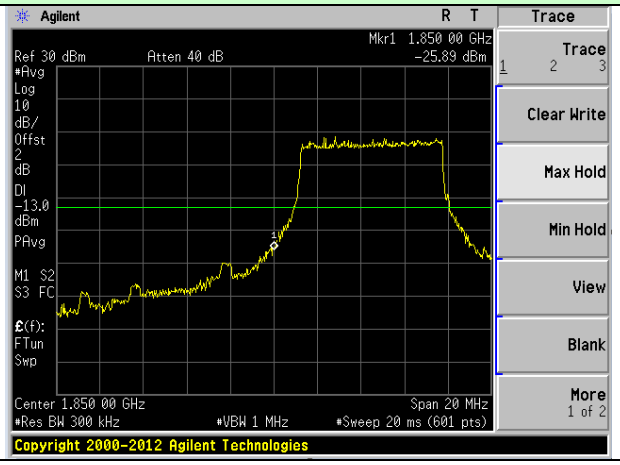
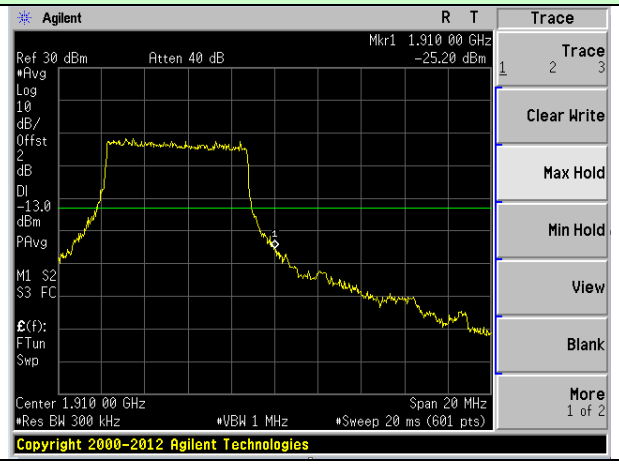
5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

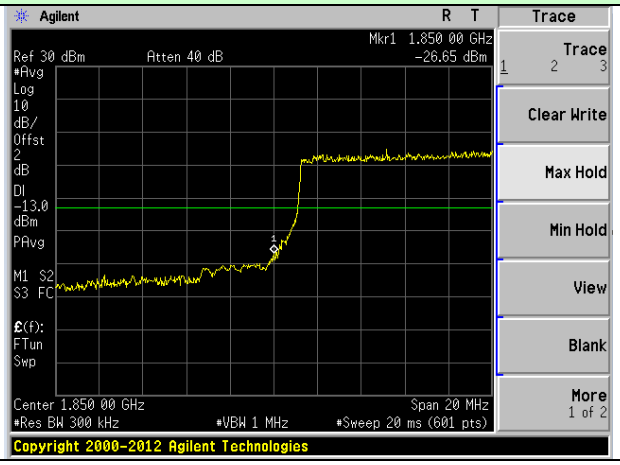
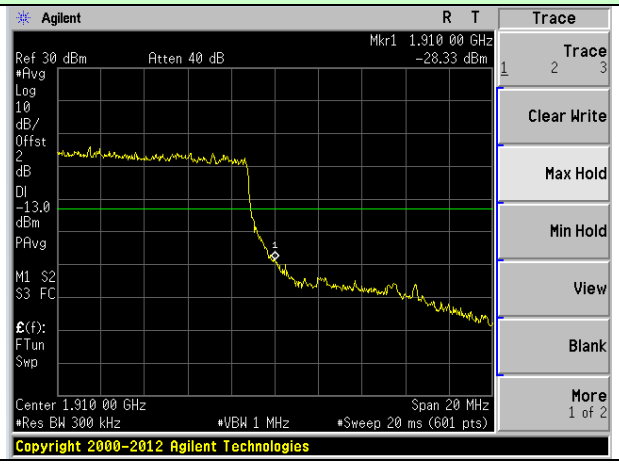
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Lowest channel	Highest channel

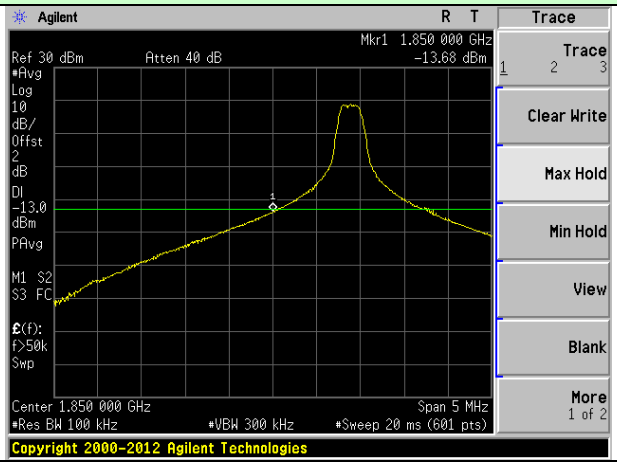
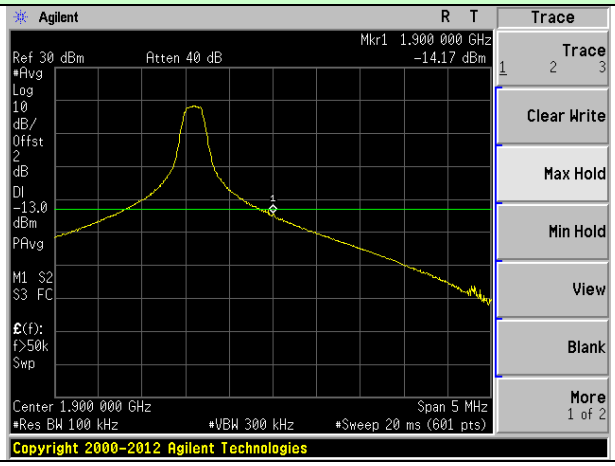
10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Lowest channel	Highest channel

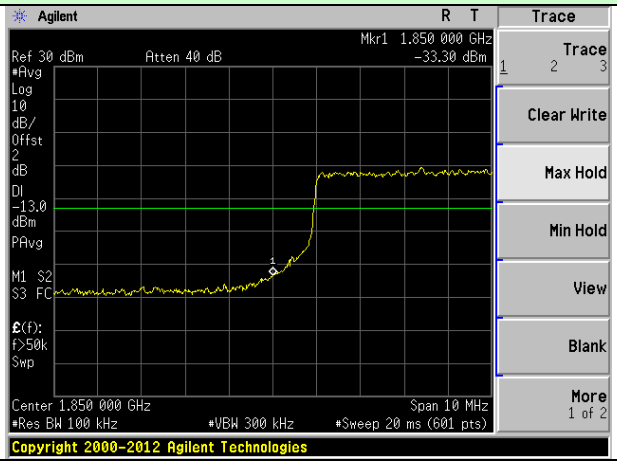
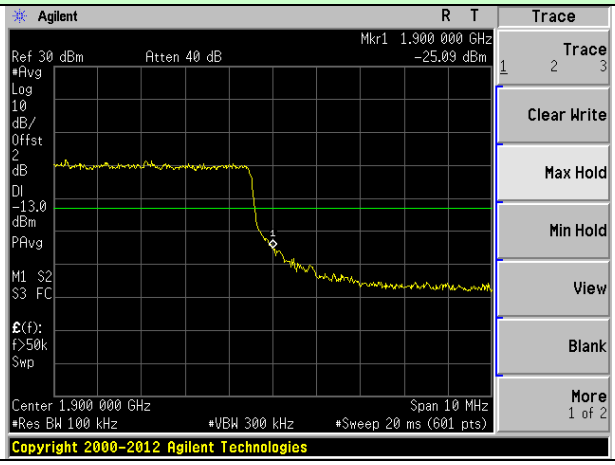
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Lowest channel	Highest channel

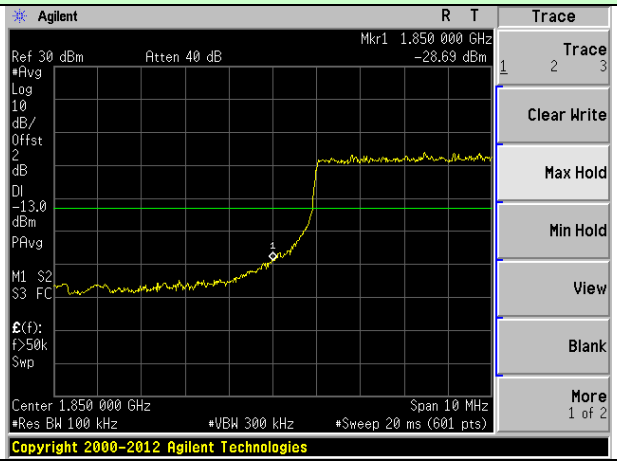
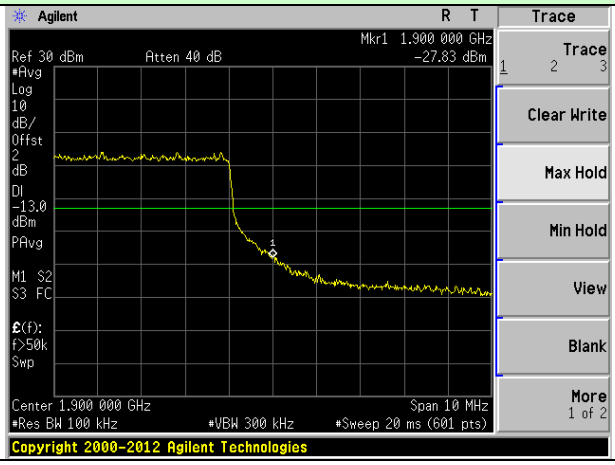
15MHz Bandwidth (RB size:1# RB offset:0#)	15MHz Bandwidth (RB size:1# RB offset:74#)
	
Lowest channel	Highest channel

15MHz Bandwidth (RB size:36# RB offset:0#)	15MHz Bandwidth (RB size:36# RB offset:39#)
	
Lowest channel	Highest channel

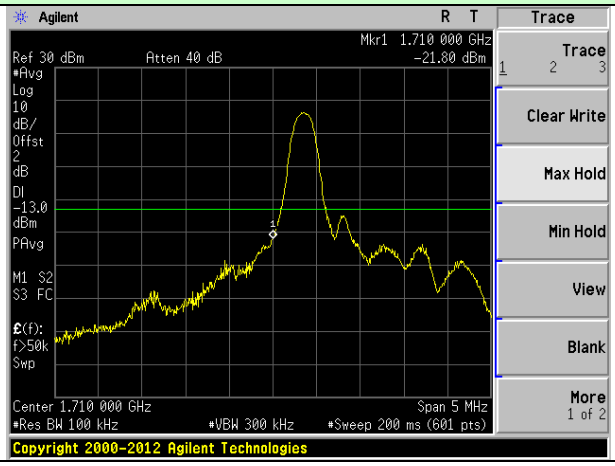
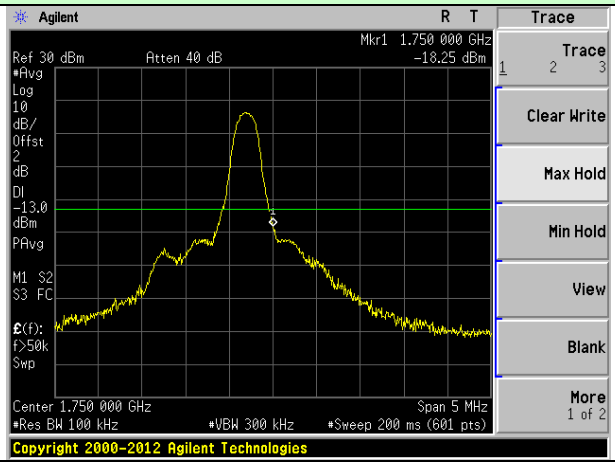
15MHz Bandwidth (RB size:75# RB offset:0#)	15MHz Bandwidth (RB size:75# RB offset:0#)
	
Lowest channel	Highest channel

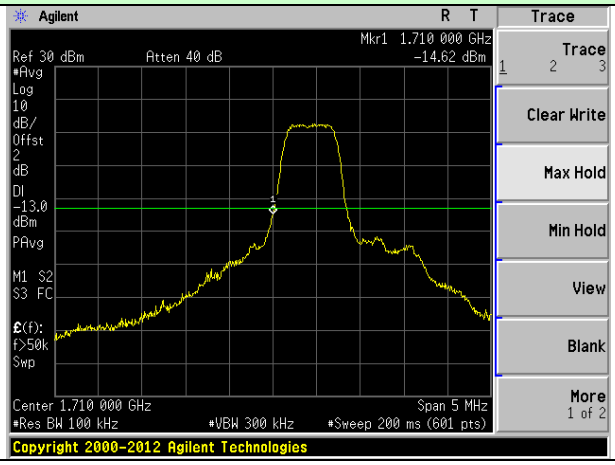
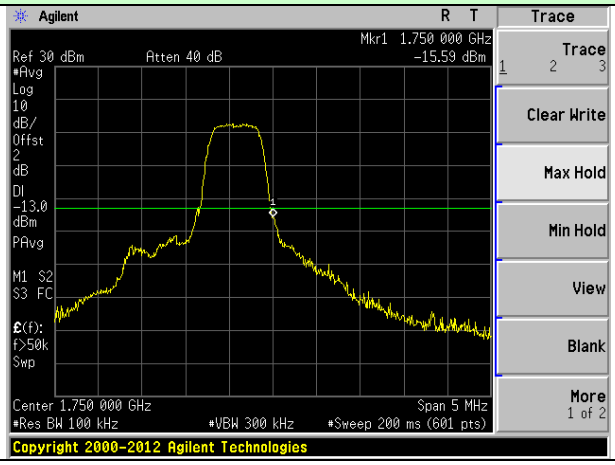
20MHz Bandwidth (RB size:1# RB offset:0#)	20MHz Bandwidth (RB size:1# RB offset:99#)
	
Lowest channel	Highest channel

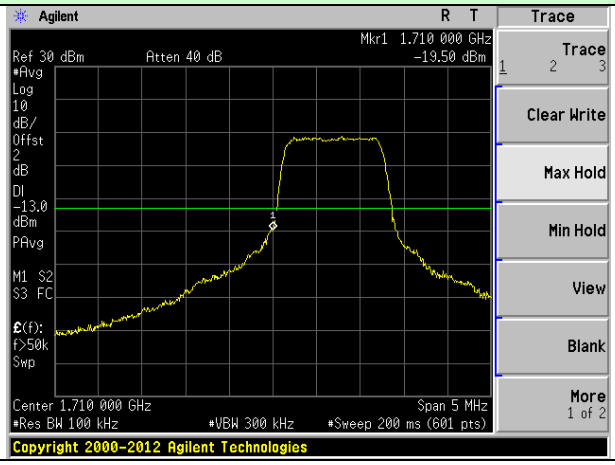
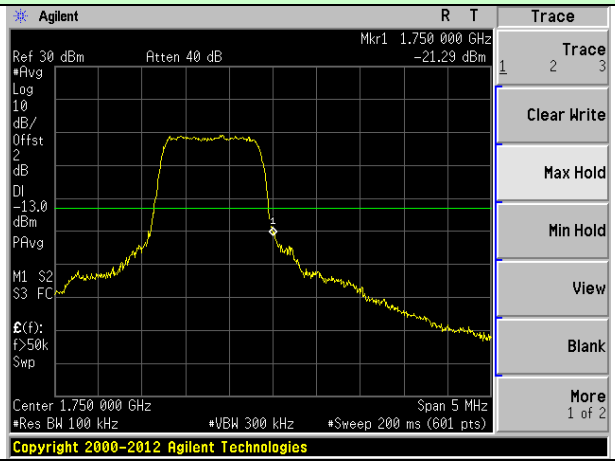
20MHz Bandwidth (RB size:50# RB offset:0#)	20MHz Bandwidth (RB size:50# RB offset:50#)
	
Lowest channel	Highest channel

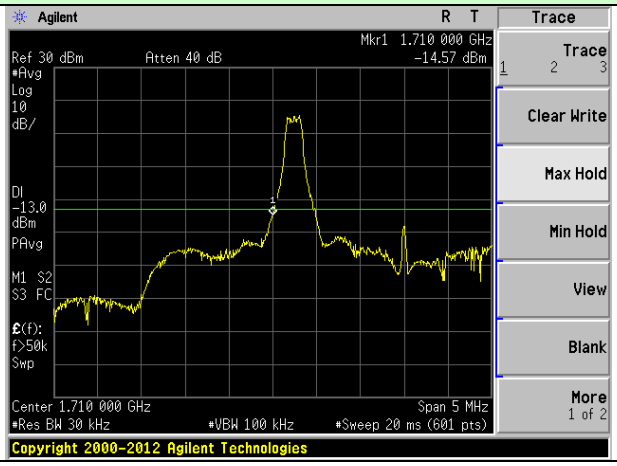
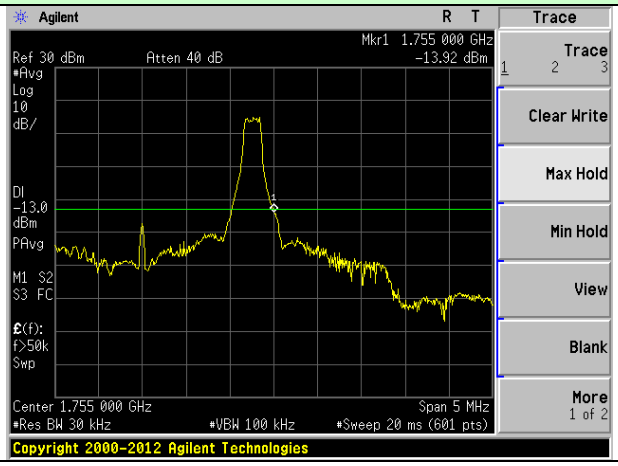
20MHz Bandwidth (RB size:100# RB offset:0#)	20MHz Bandwidth (RB size:100# RB offset:0#)
	
Lowest channel	Highest channel

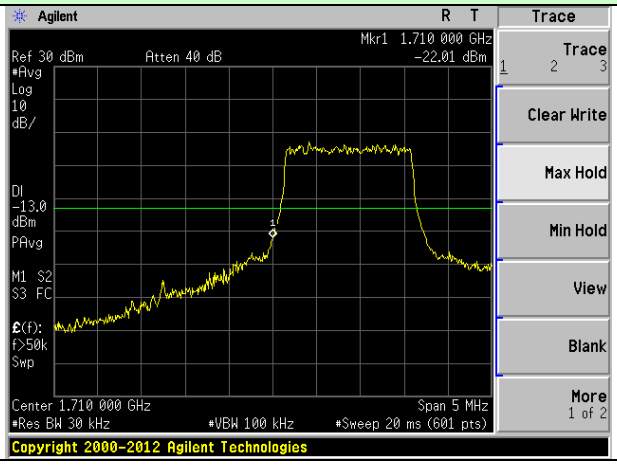
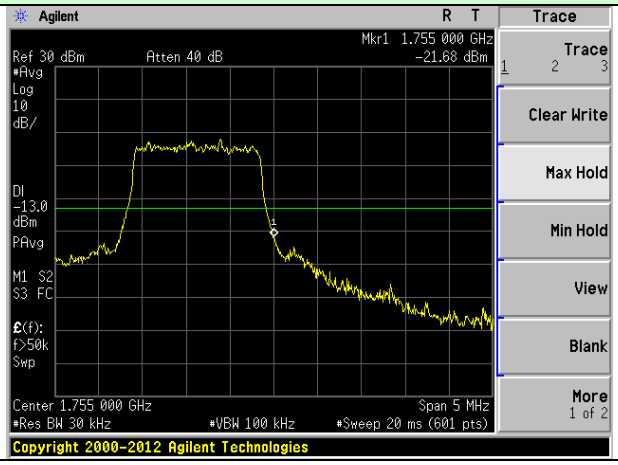
LTE Band 4

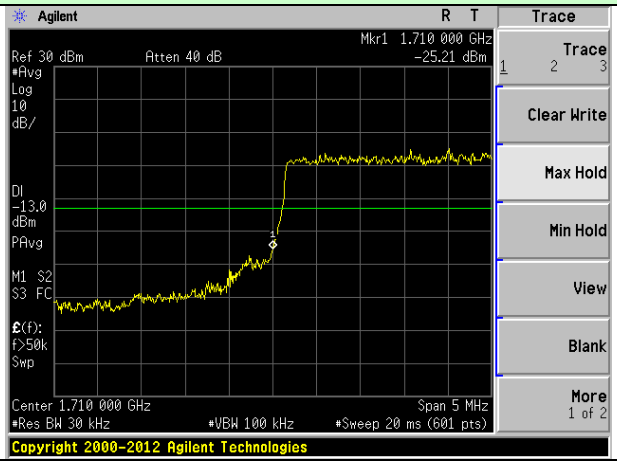
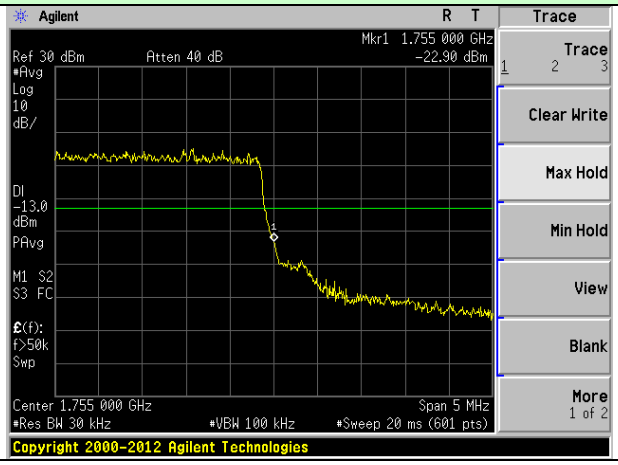
1.4MHz Bandwidth (RB size:1# RB offset:0#)	1.4MHz Bandwidth (RB size:1# RB offset:5#)
	
Lowest channel	Highest channel

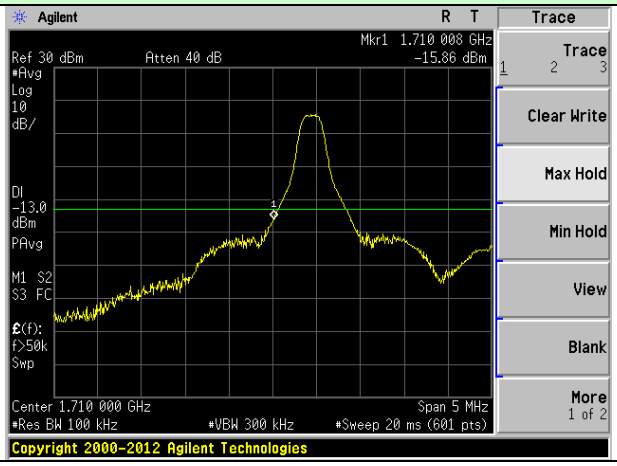
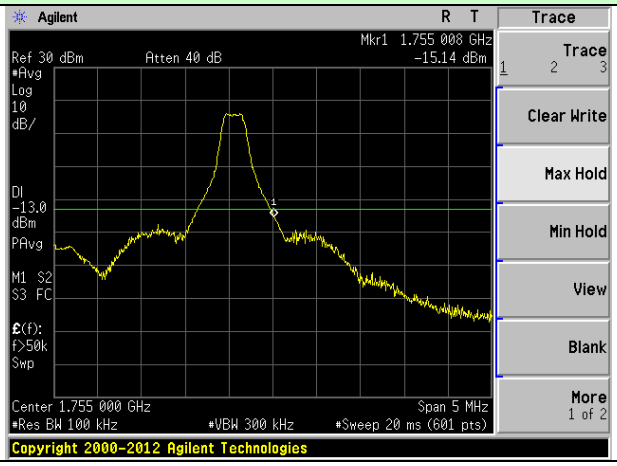
1.4MHz Bandwidth (RB size:3# RB offset:0#)	1.4MHz Bandwidth (RB size:3# RB offset:2#)
	
Lowest channel	Highest channel

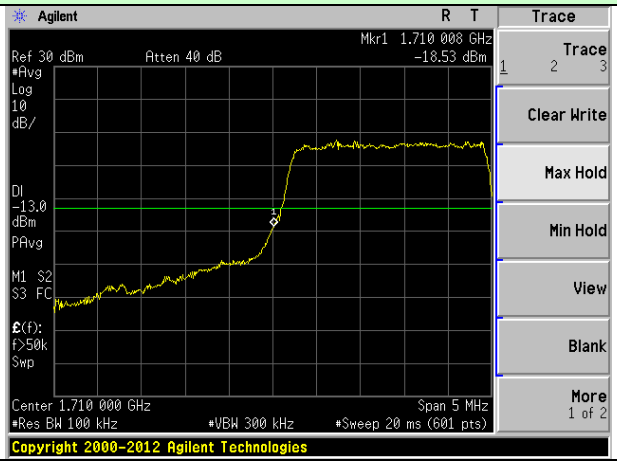
1.4MHz Bandwidth (RB size:6# RB offset:0#)	1.4MHz Bandwidth (RB size:6# RB offset:0#)
	
Lowest channel	Highest channel

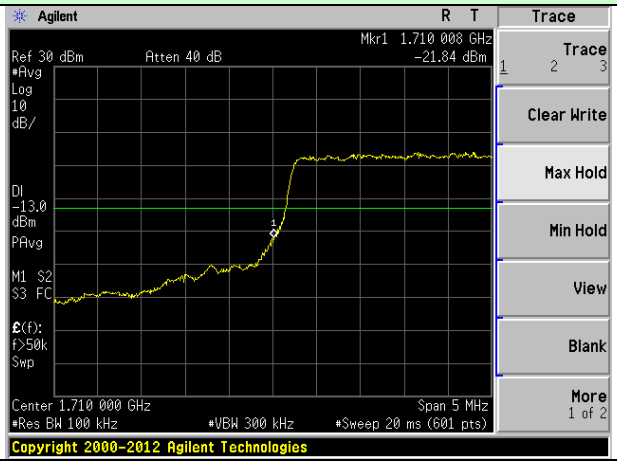
3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:14#)
	
Lowest channel	Highest channel

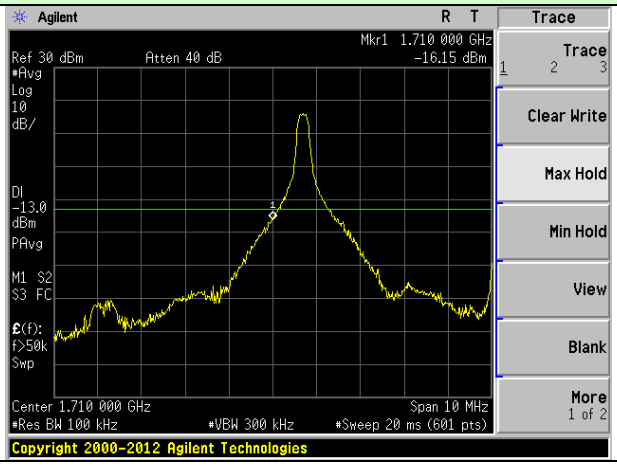
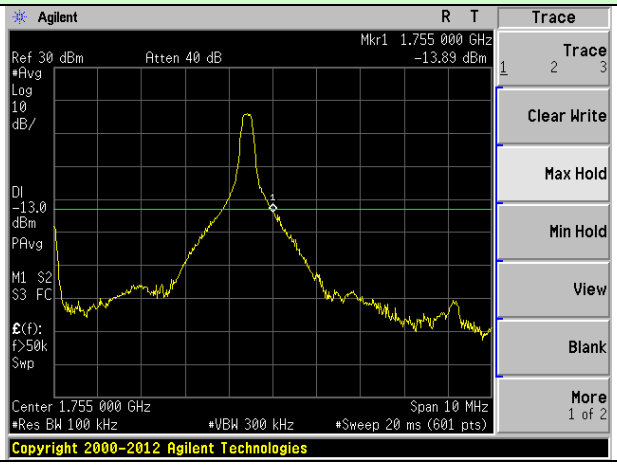
3MHz Bandwidth (RB size:8# RB offset:0#)	3MHz Bandwidth (RB size:8# RB offset:7#)
	
Lowest channel	Highest channel

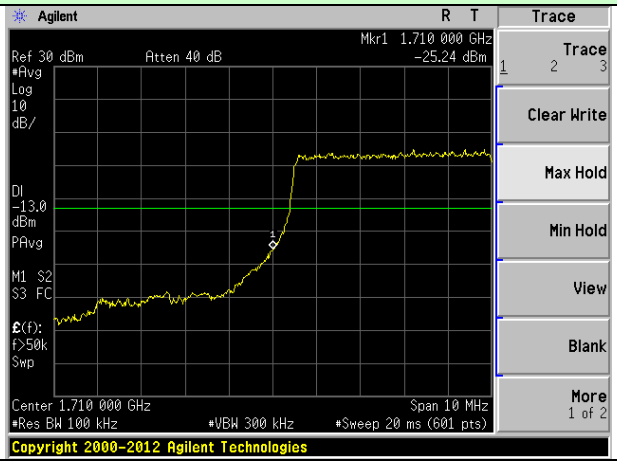
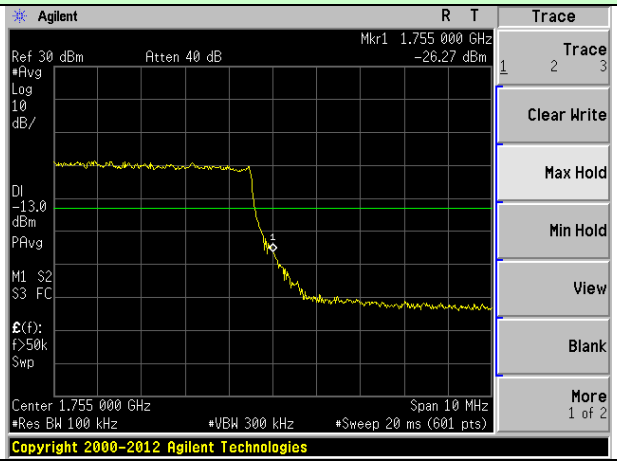
3MHz Bandwidth (RB size:15# RB offset:0#)	3MHz Bandwidth (RB size:15# RB offset:0#)
	
Lowest channel	Highest channel

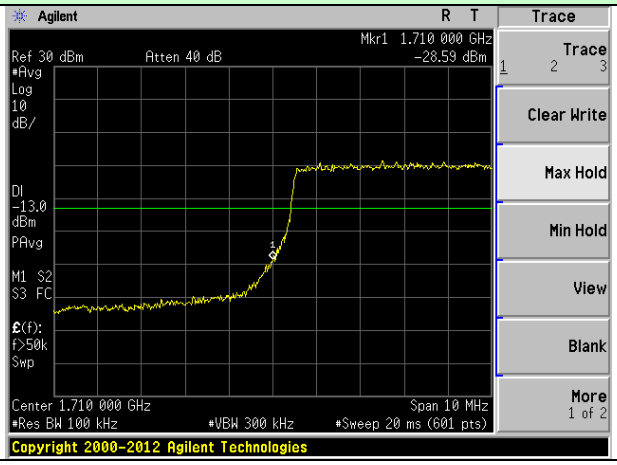
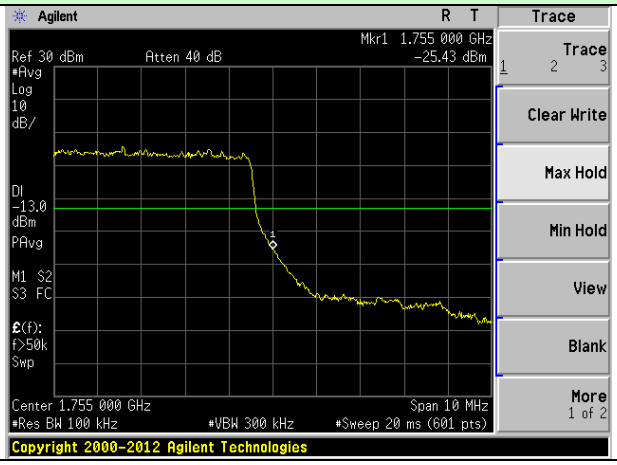
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

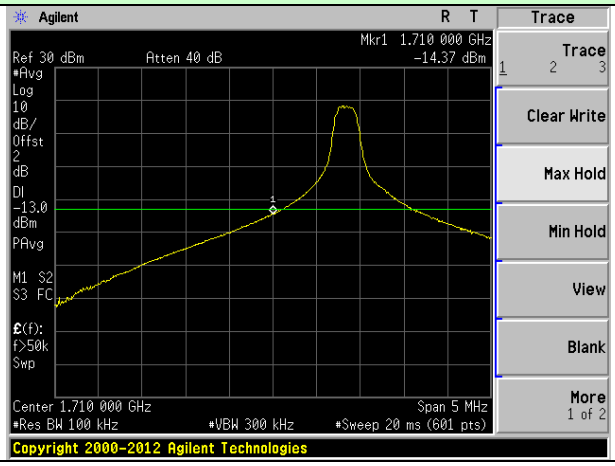
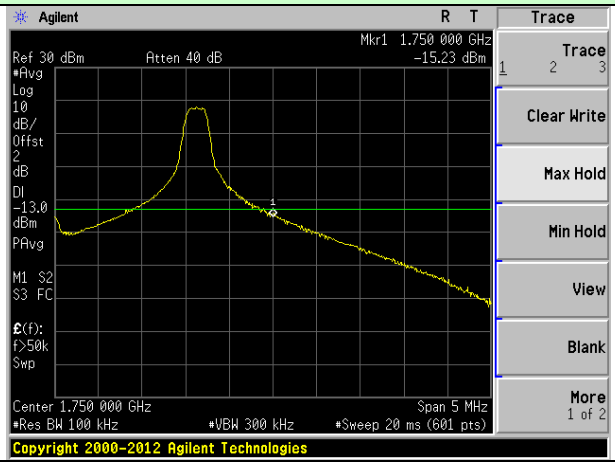
5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

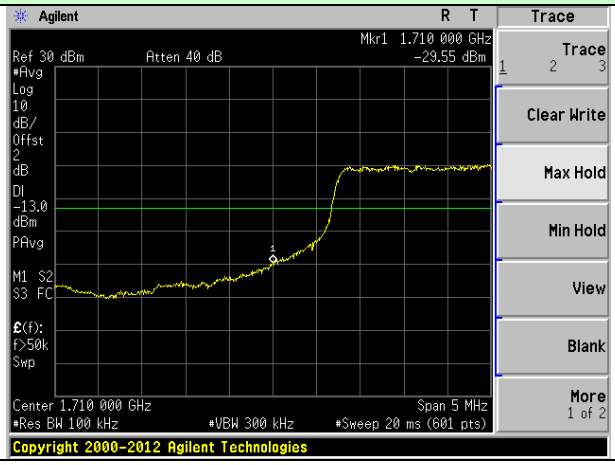
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Lowest channel	Highest channel

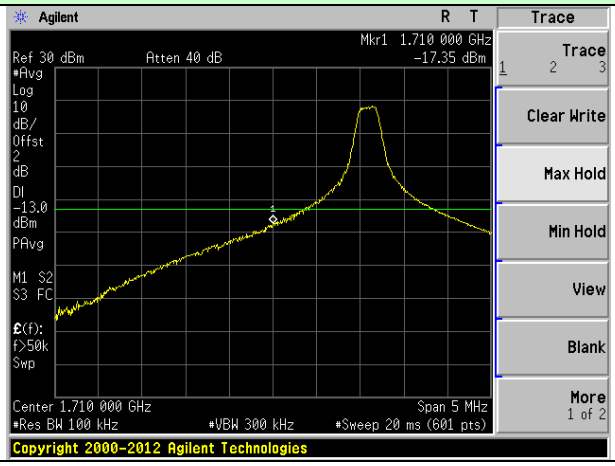
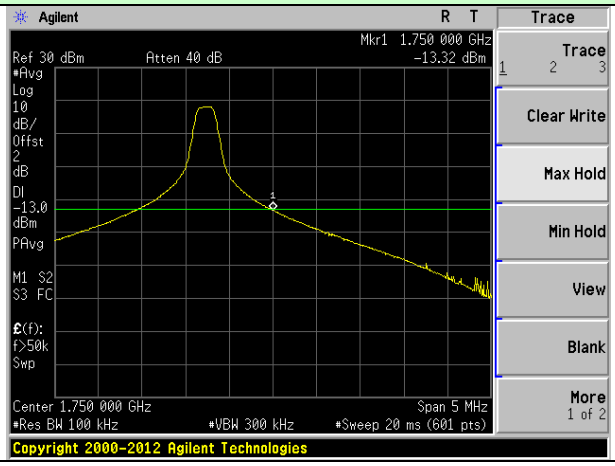
10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Lowest channel	Highest channel

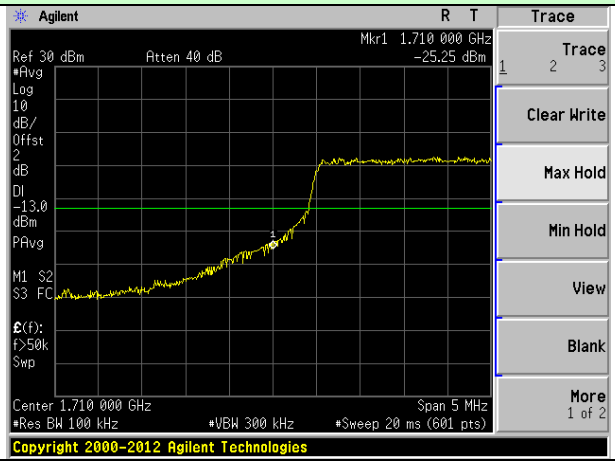
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Lowest channel	Highest channel

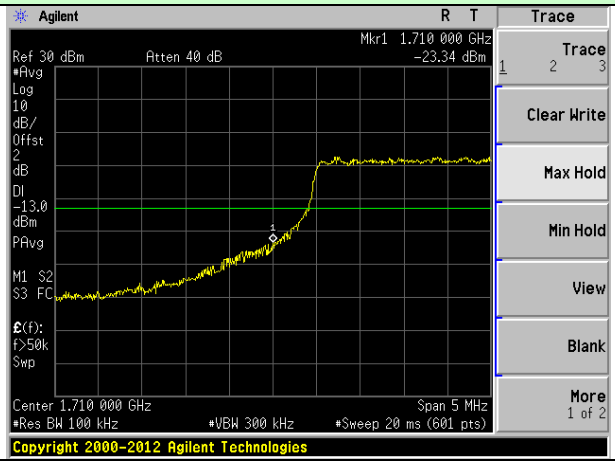
15MHz Bandwidth (RB size:1# RB offset:0#)	15MHz Bandwidth (RB size:1# RB offset:74#)
	
Lowest channel	Highest channel

15MHz Bandwidth (RB size:36# RB offset:0#)	15MHz Bandwidth (RB size:36# RB offset:39#)
Lowest channel	Highest channel

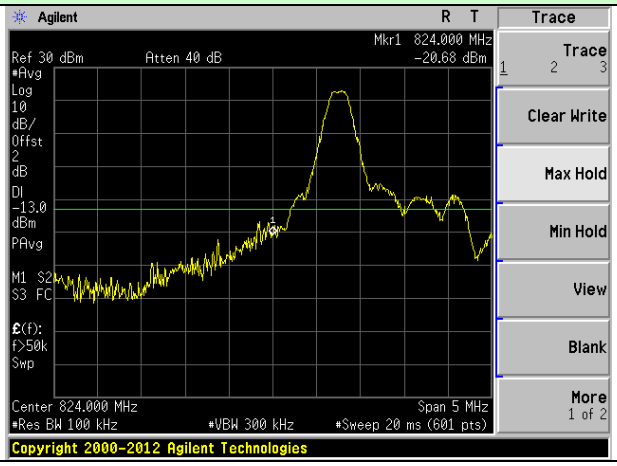
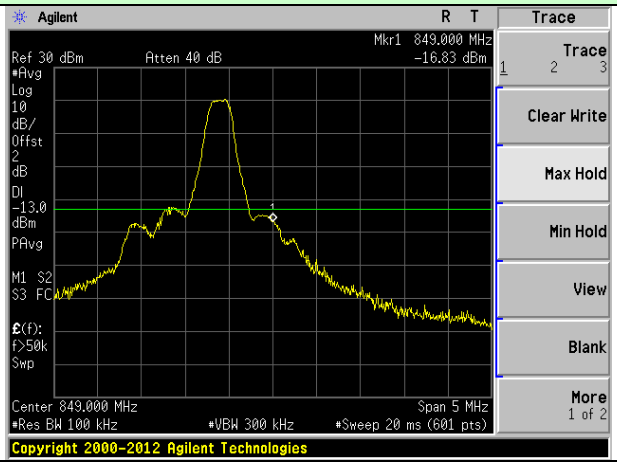
15MHz Bandwidth (RB size:75# RB offset:0#)	15MHz Bandwidth (RB size:75# RB offset:0#)
	
Lowest channel	Highest channel

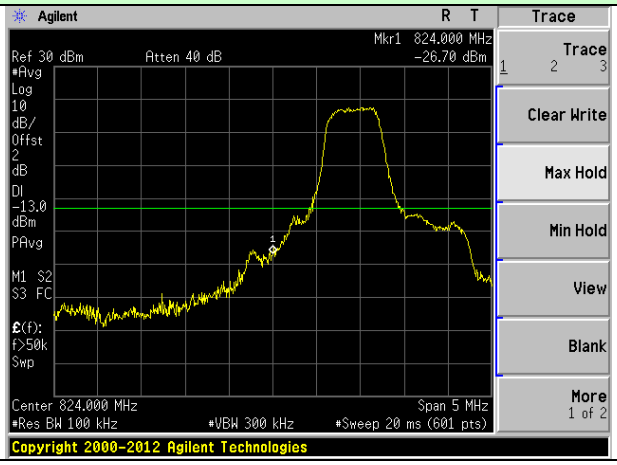
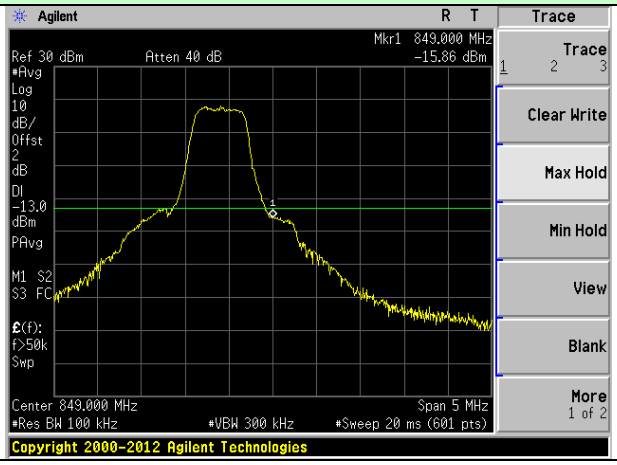
20MHz Bandwidth (RB size:1# RB offset:0#)	20MHz Bandwidth (RB size:1# RB offset:99#)
	
Lowest channel	Highest channel

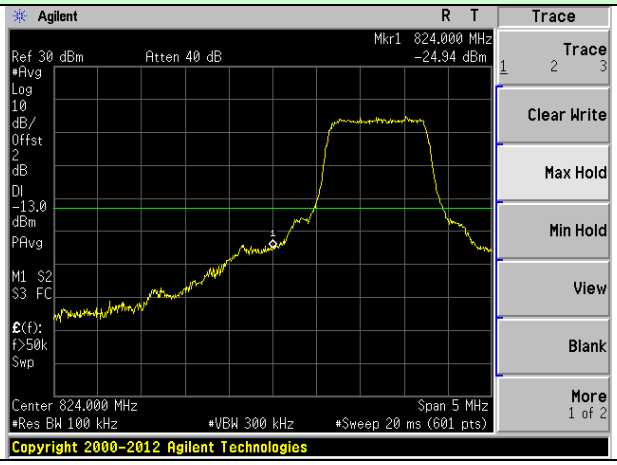
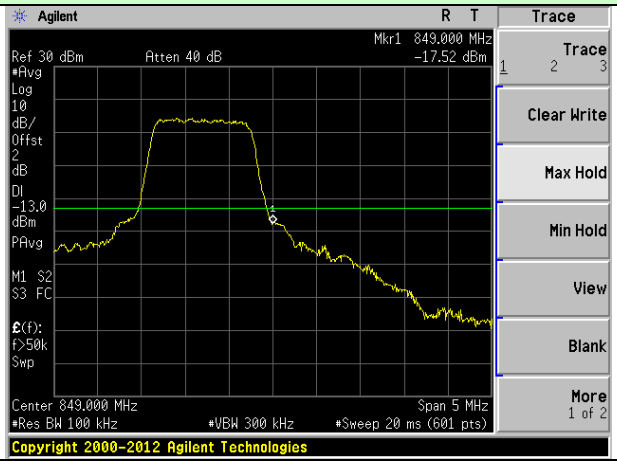
20MHz Bandwidth (RB size:50# RB offset:0#)	20MHz Bandwidth (RB size:50# RB offset:50#)
	
Lowest channel	Highest channel

20MHz Bandwidth (RB size:100# RB offset:0#)	20MHz Bandwidth (RB size:100# RB offset:0#)
	
Lowest channel	Highest channel

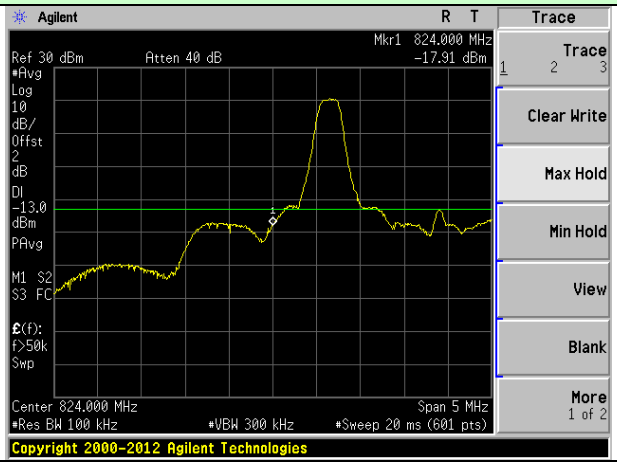
LTE Band 5:

1.4MHz Bandwidth (RB size:1# RB offset:0#)	1.4MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

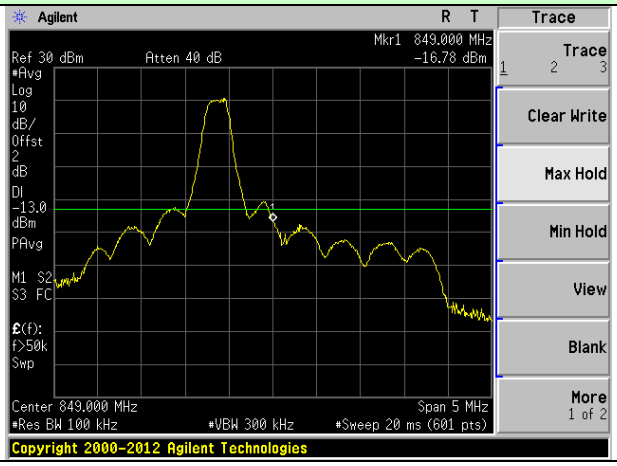
1.4MHz Bandwidth (RB size:12# RB offset:0#)	1.4MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

1.4MHz Bandwidth (RB size:25# RB offset:0#)	1.4MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:49#)

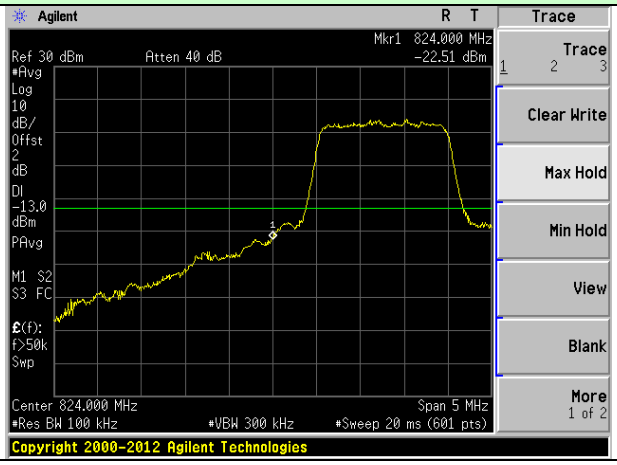


Lowest channel

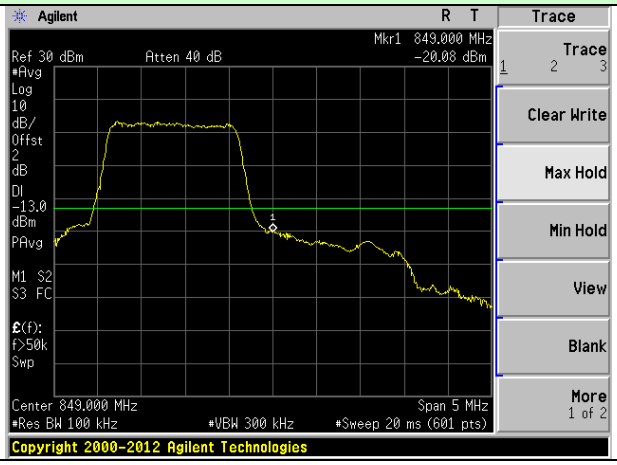


Highest channel

3MHz Bandwidth (RB size:25# RB offset:0#)	3MHz Bandwidth (RB size:25# RB offset:25#)

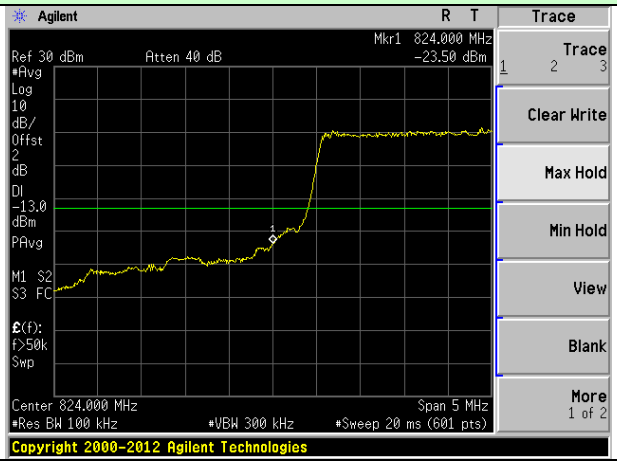


Lowest channel



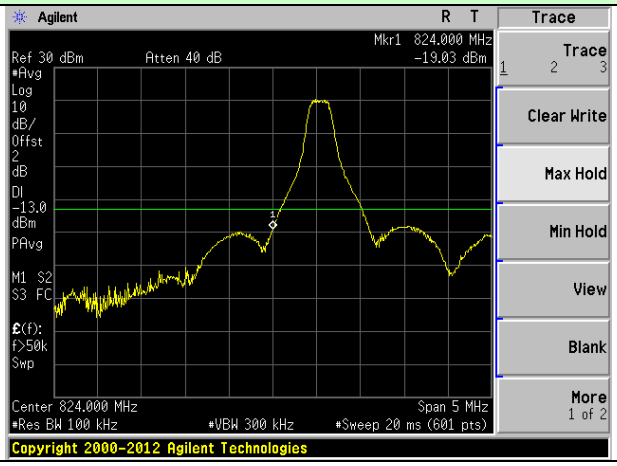
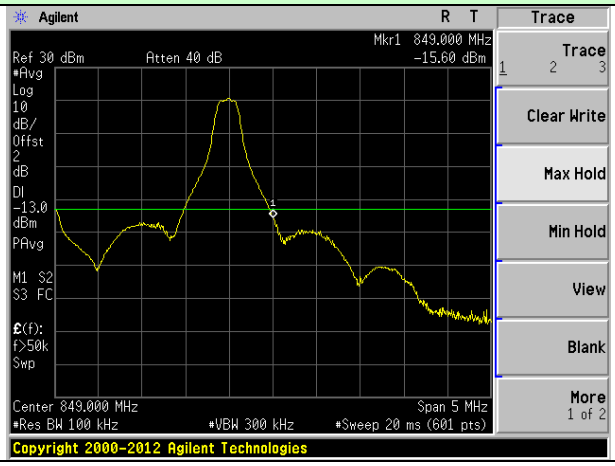
Highest channel

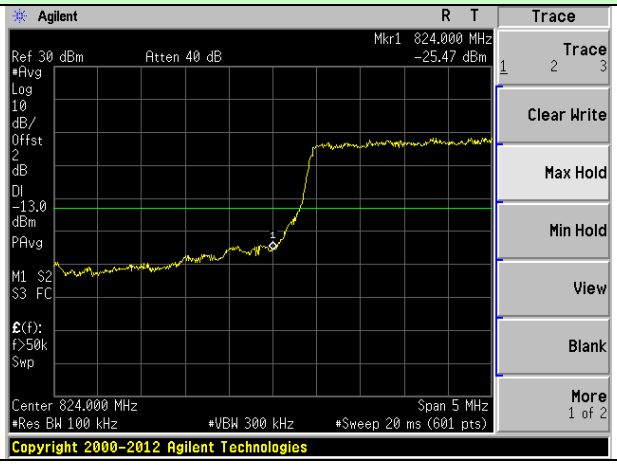
3MHz Bandwidth (RB size:50# RB offset:0#)	3MHz Bandwidth (RB size:50# RB offset:0#)

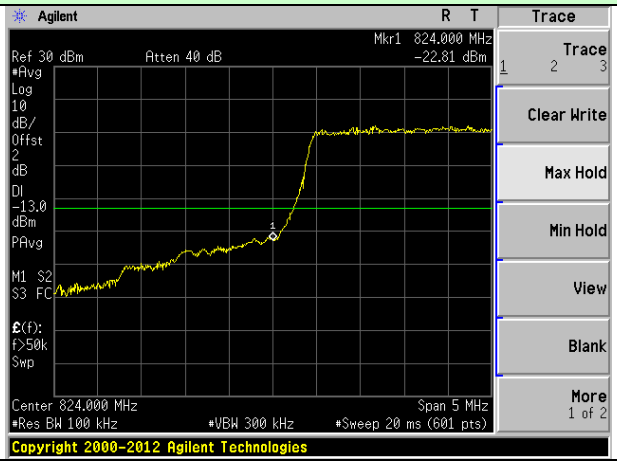


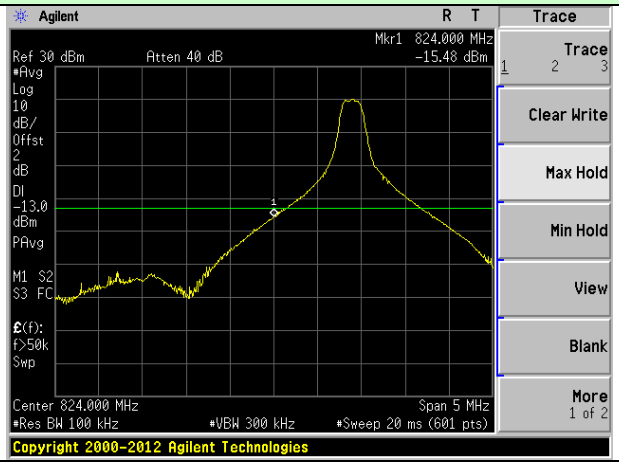
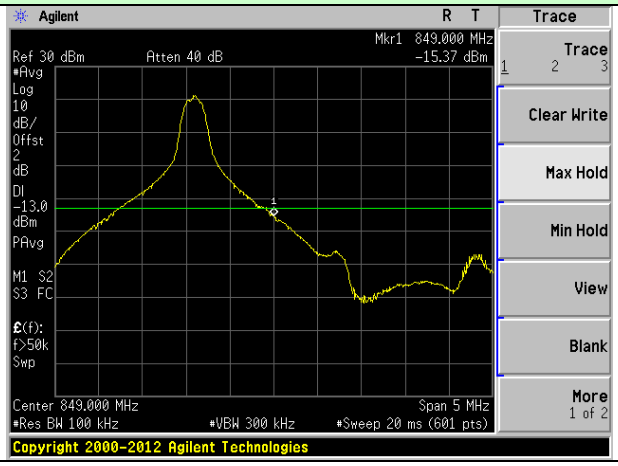
Lowest channel

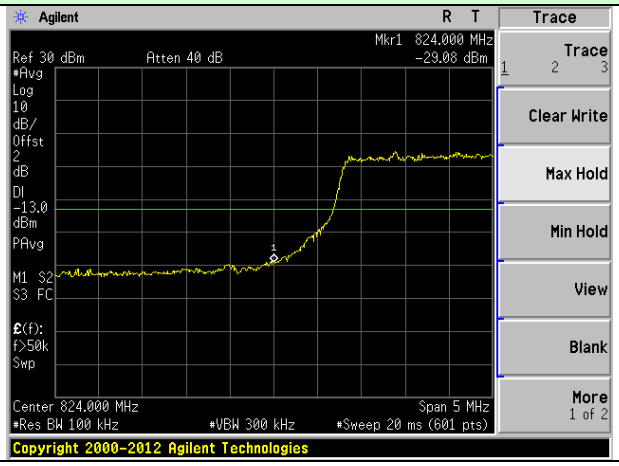
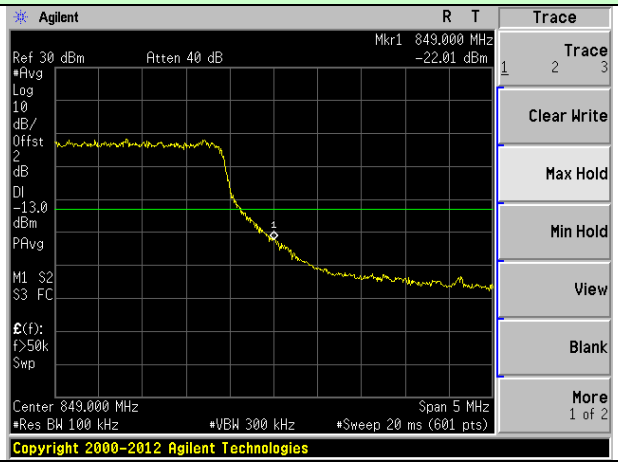
Highest channel

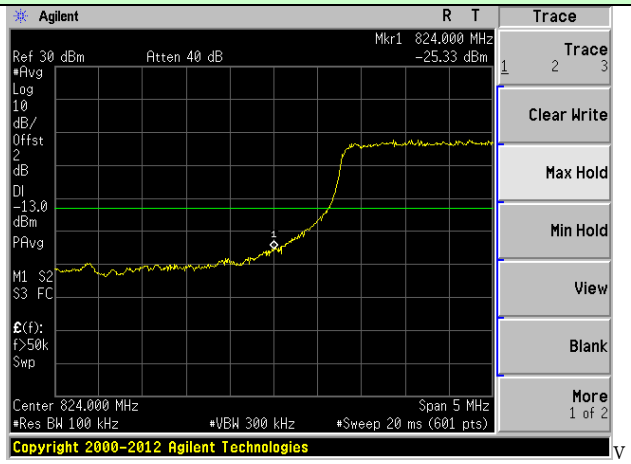
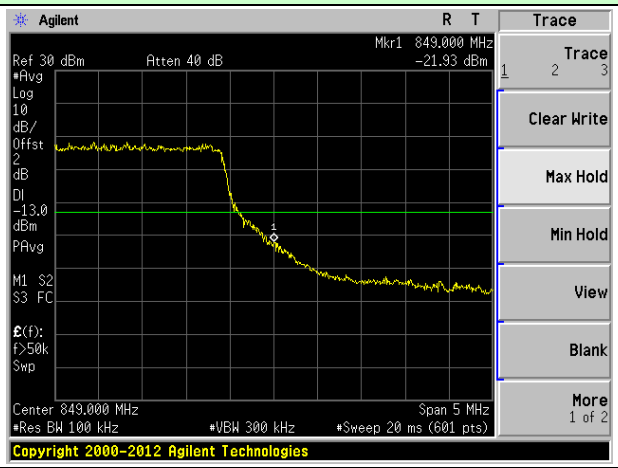
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:74#)
	
Lowest channel	Highest channel

5MHz Bandwidth (RB size:36# RB offset:0#)	5MHz Bandwidth (RB size:36# RB offset:39#)
	
Lowest channel	Highest channel

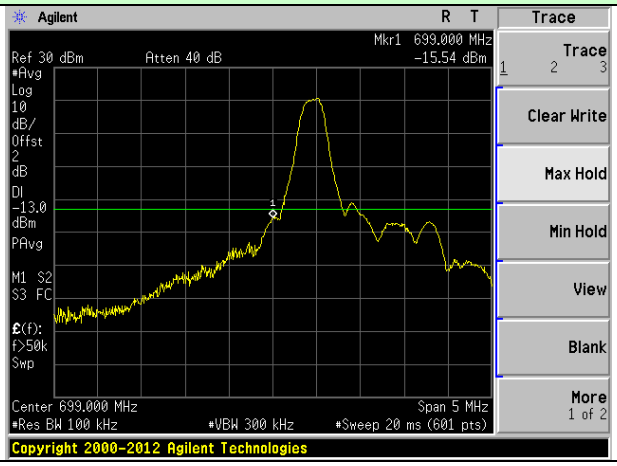
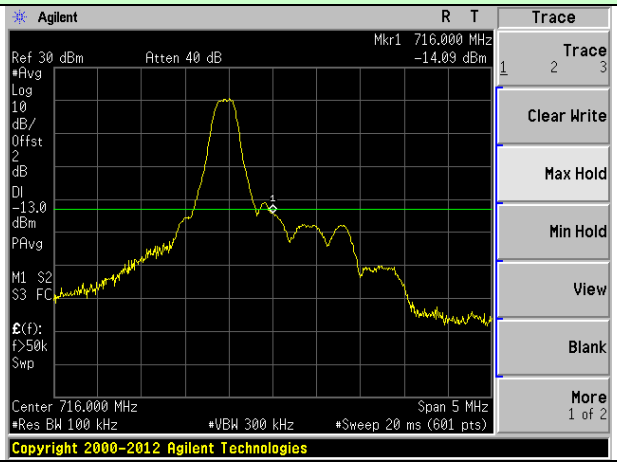
5MHz Bandwidth (RB size:75# RB offset:0#)	5MHz Bandwidth (RB size:75# RB offset:0#)
	
Lowest channel	Highest channel

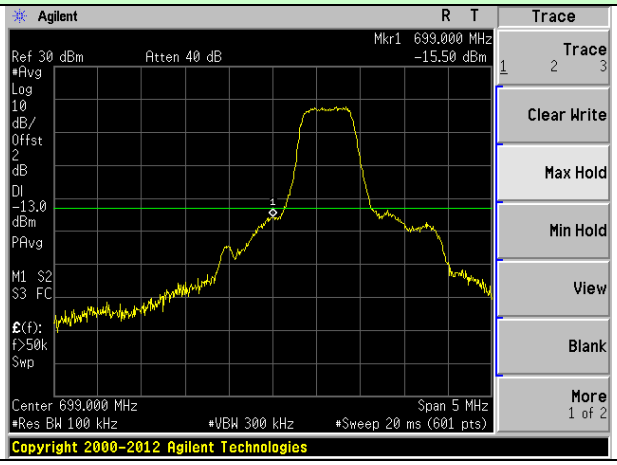
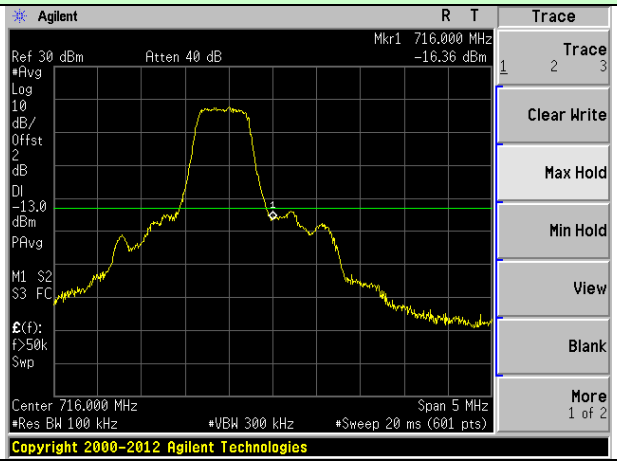
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:99#)
	
Lowest channel	Highest channel

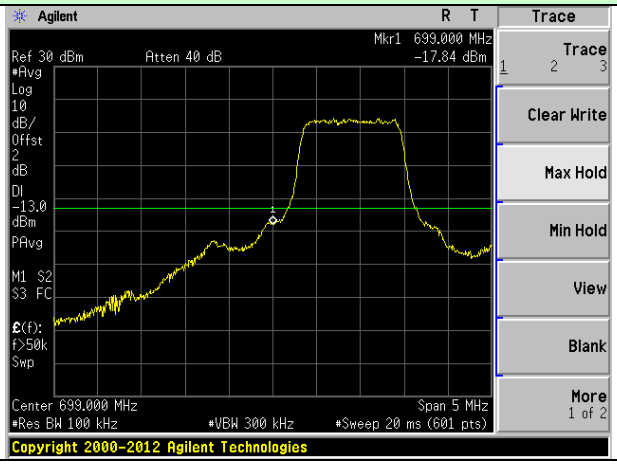
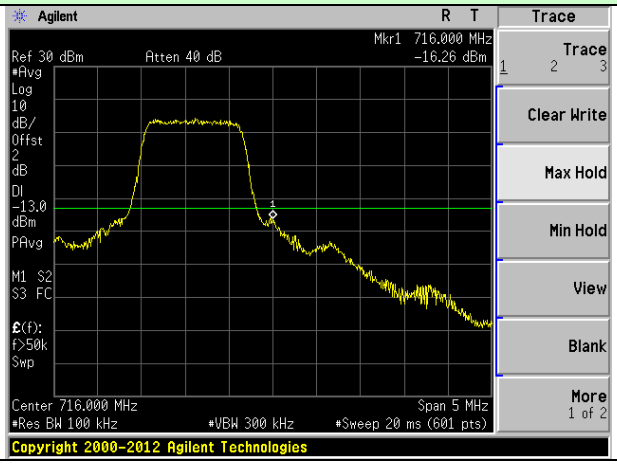
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:50#)
	
Lowest channel	Highest channel

10MHz Bandwidth (RB size:100# RB offset:0#)	10MHz Bandwidth (RB size:100# RB offset:0#)
	
Lowest channel	Highest channel

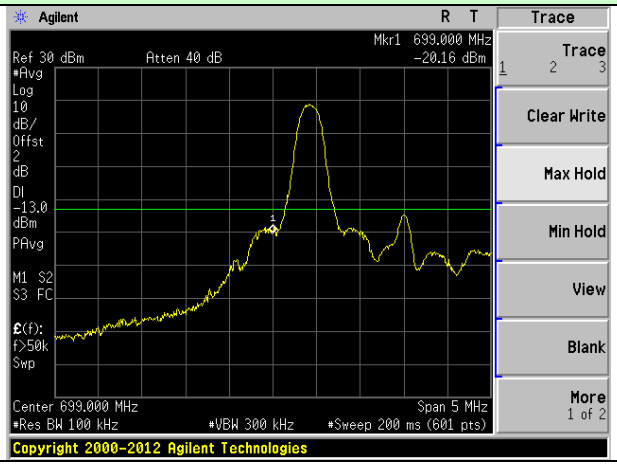
LTE Band 12:

1.4MHz Bandwidth (RB size:1# RB offset:0#)	1.4MHz Bandwidth (RB size:1# RB offset:5#)
	
Lowest channel	Highest channel

1.4MHz Bandwidth (RB size:3# RB offset:0#)	1.4MHz Bandwidth (RB size:3# RB offset:2#)
	
Lowest channel	Highest channel

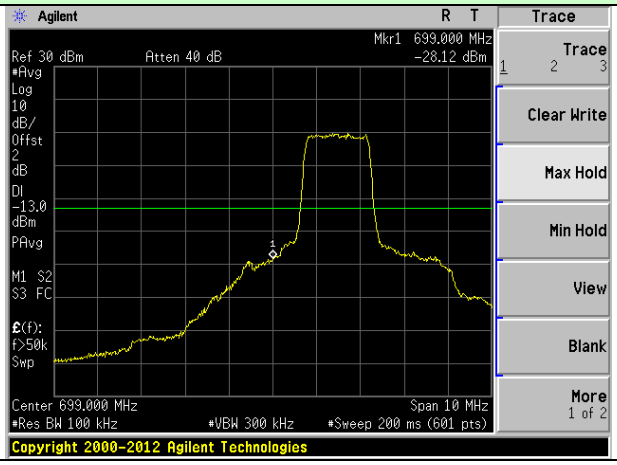
1.4MHz Bandwidth (RB size 6# RB offset:0#)	1.4MHz Bandwidth (RB size:6# RB offset:0#)
	
Lowest channel	Highest channel

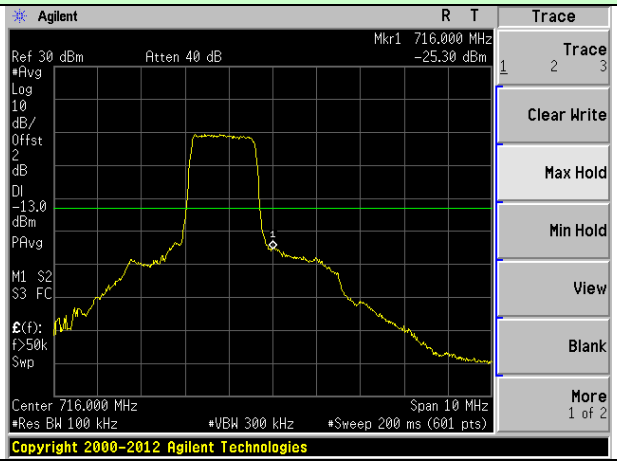
3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:14#)



Lowest channel | Highest channel

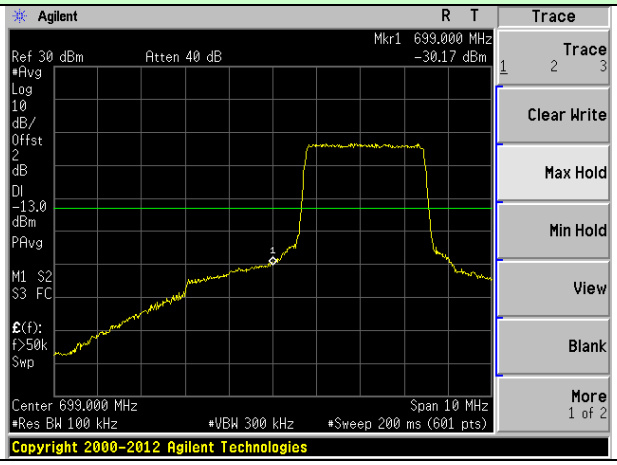
3MHz Bandwidth (RB size:8# RB offset:0#)	3MHz Bandwidth (RB size:8# RB offset:7#)

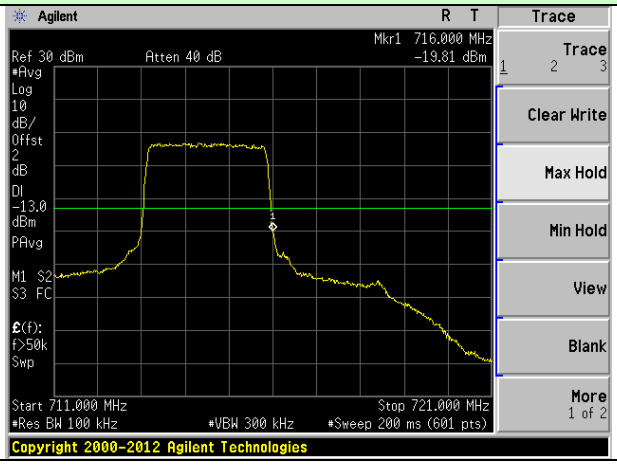




Lowest channel | Highest channel

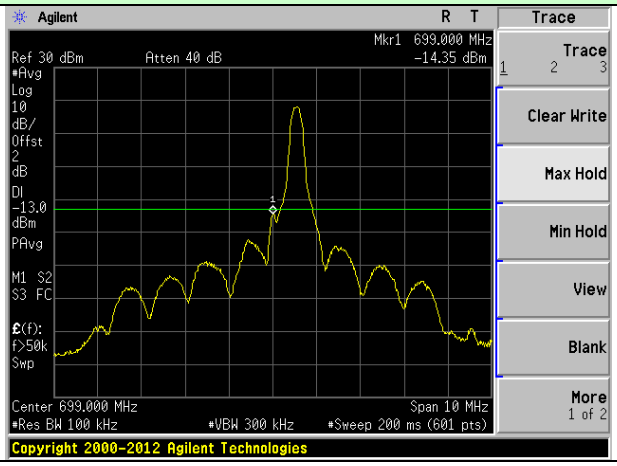
3MHz Bandwidth (RB size:15# RB offset:0#)	3MHz Bandwidth (RB size:15# RB offset:0#)



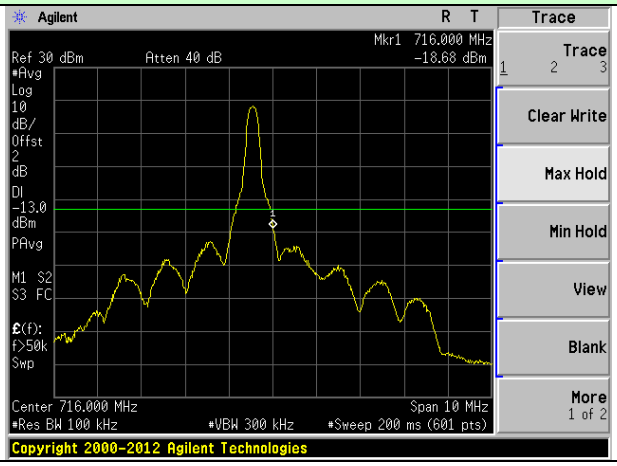


Lowest channel | Highest channel

5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)

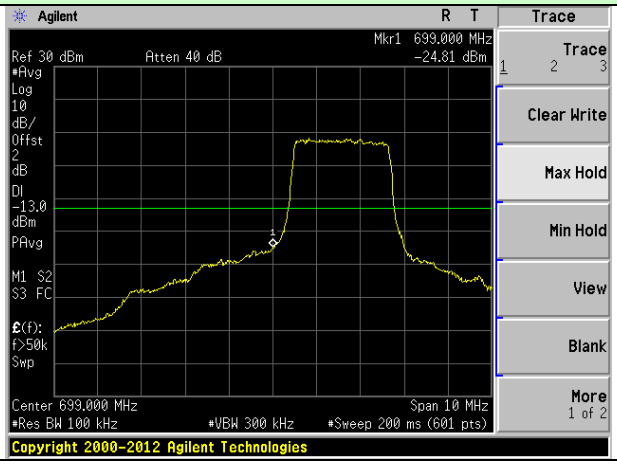


Lowest channel

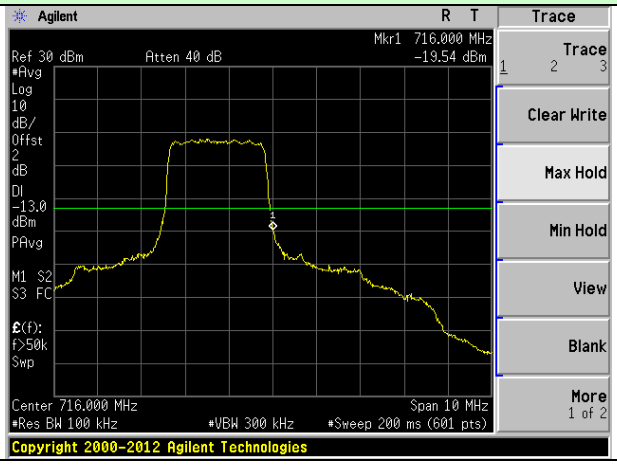


Highest channel

5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)

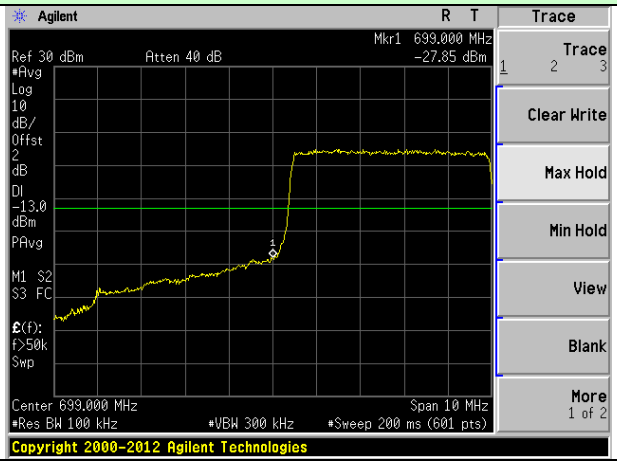


Lowest channel

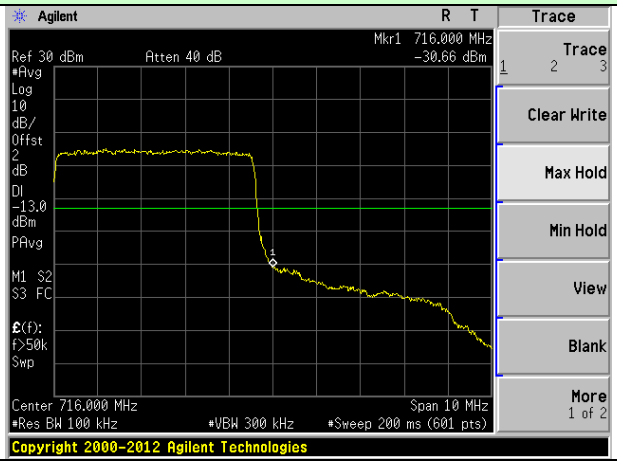


Highest channel

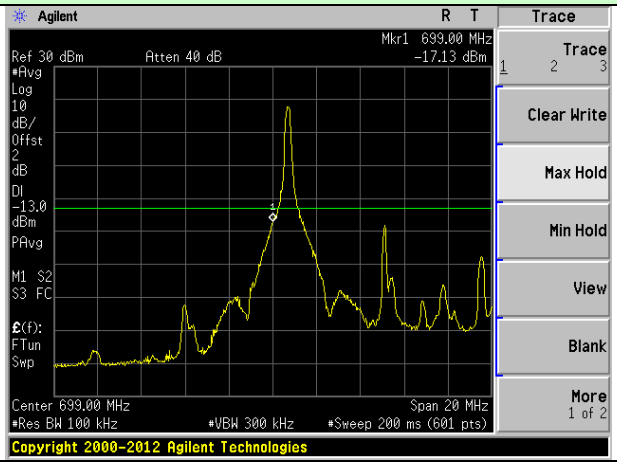
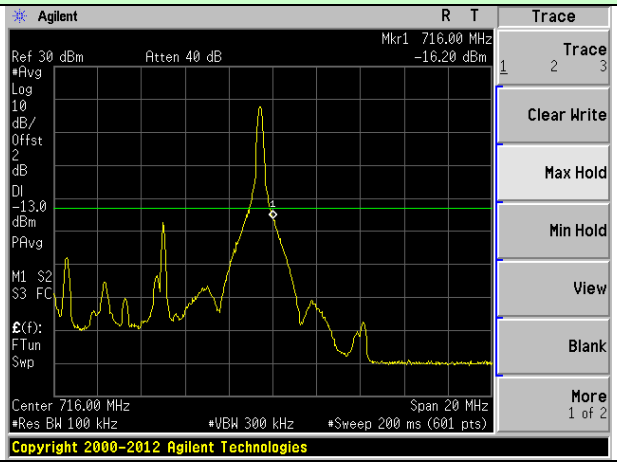
5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)

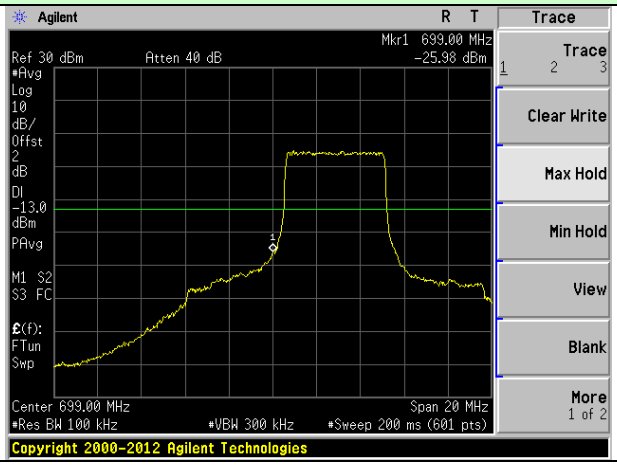
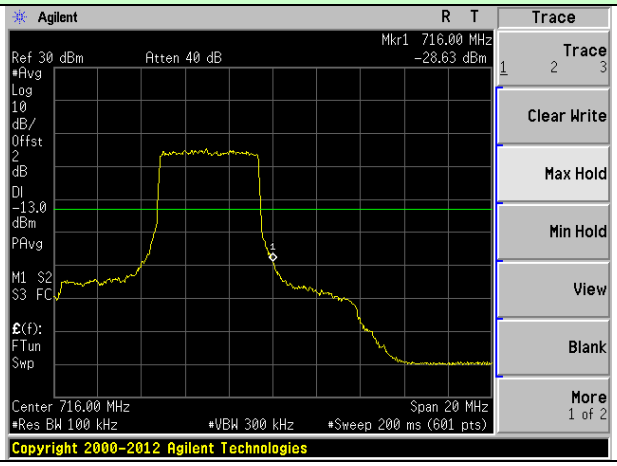


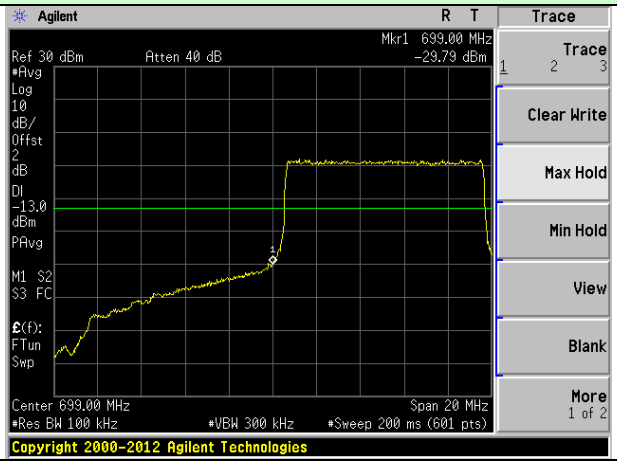
Lowest channel



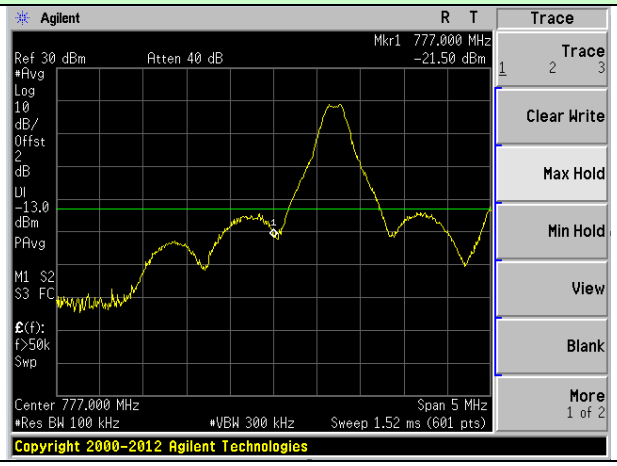
Highest channel

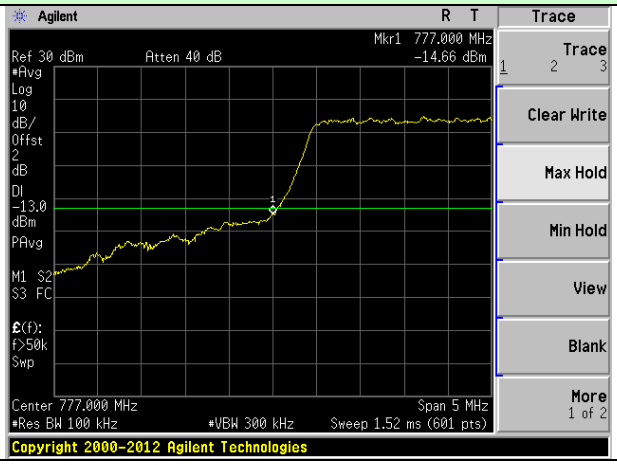
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Lowest channel	Highest channel

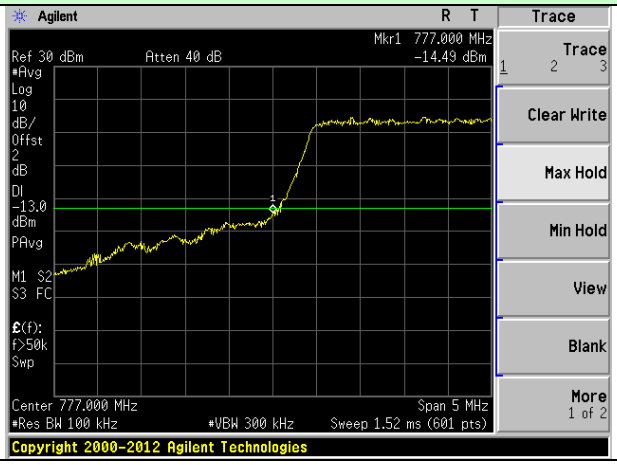
10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Lowest channel	Highest channel

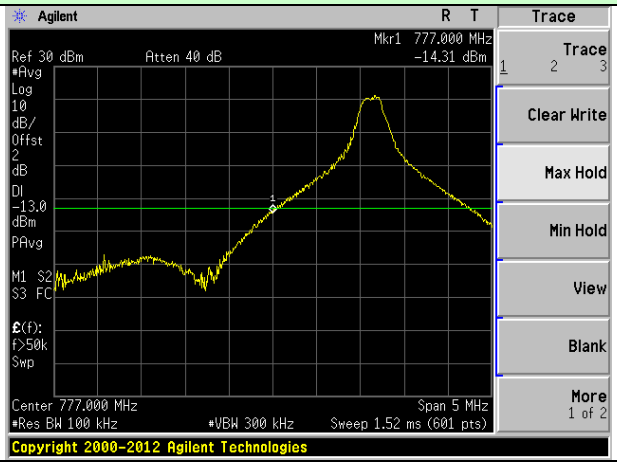
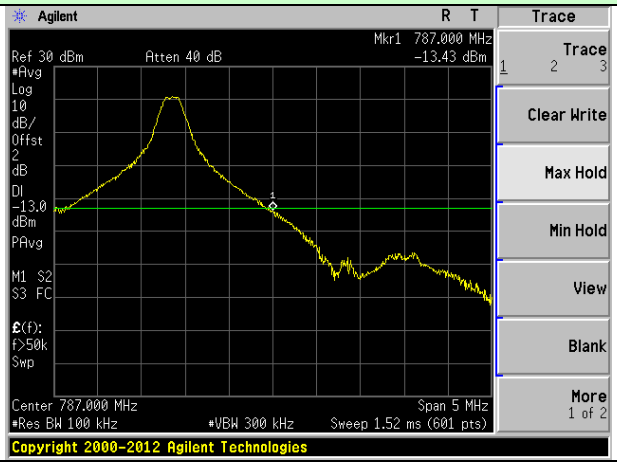
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Lowest channel	Highest channel

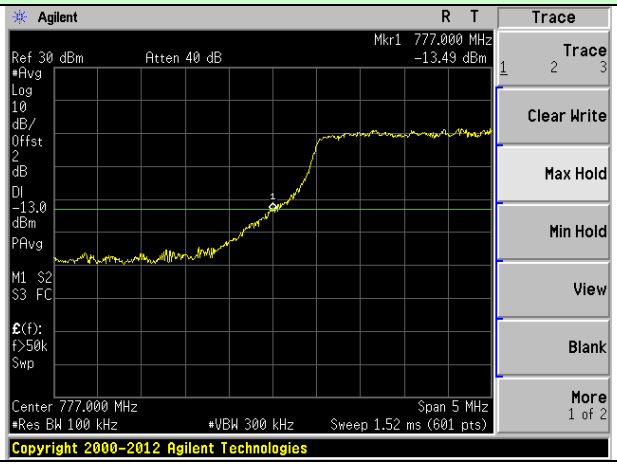
LTE band 13:

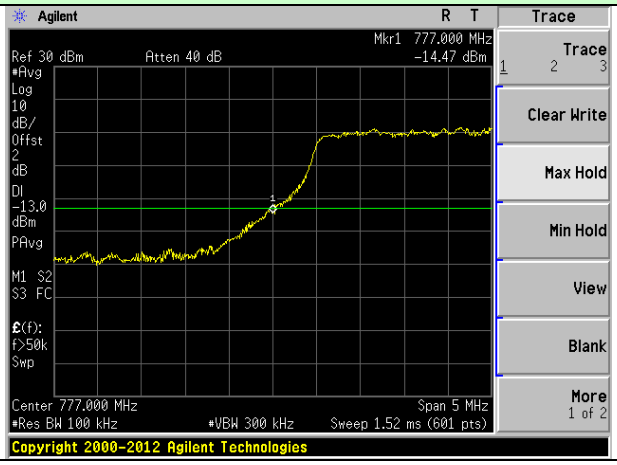
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

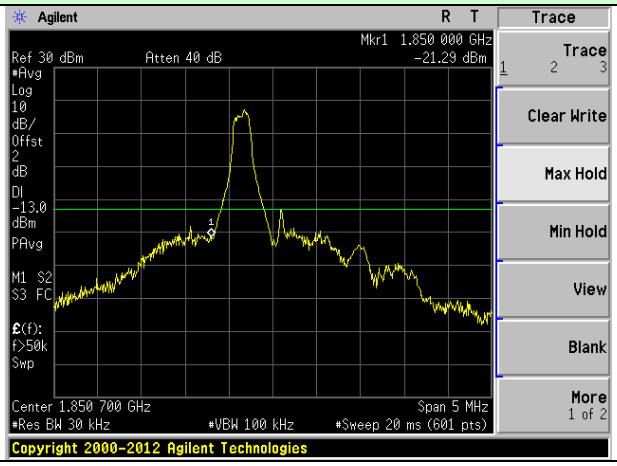
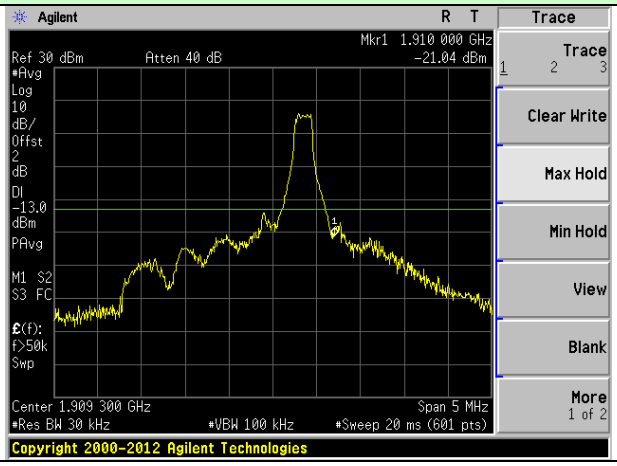
5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

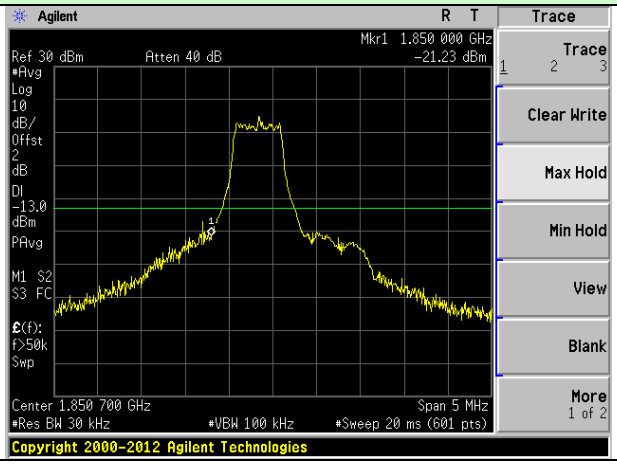
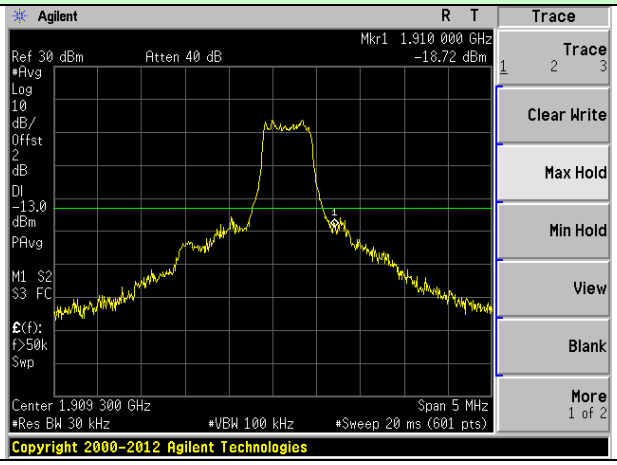
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Middle channel	Middle channel

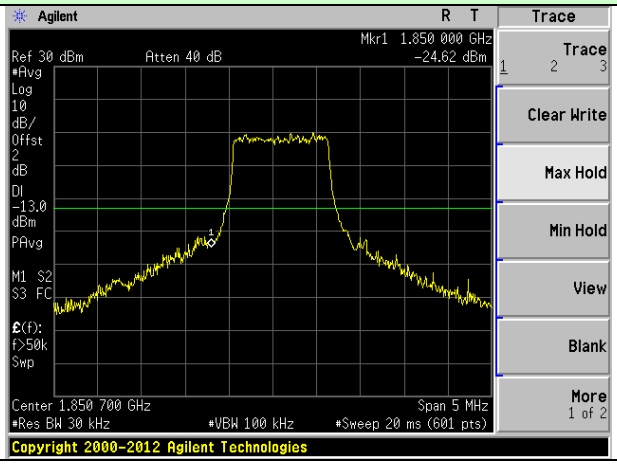
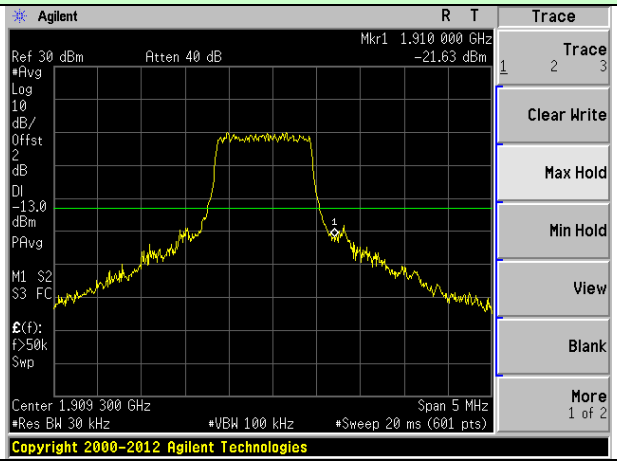
10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Middle channel	Middle channel

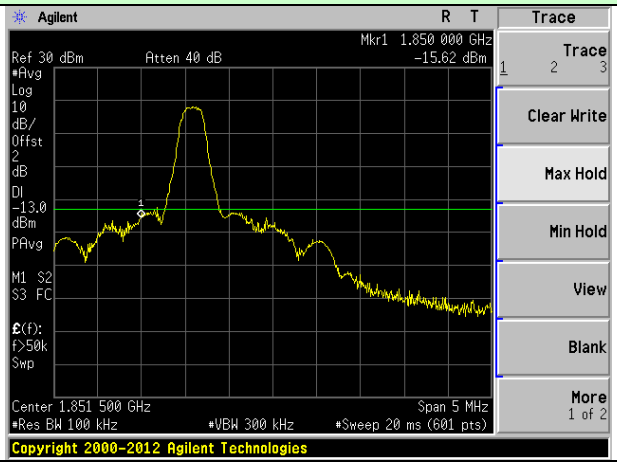
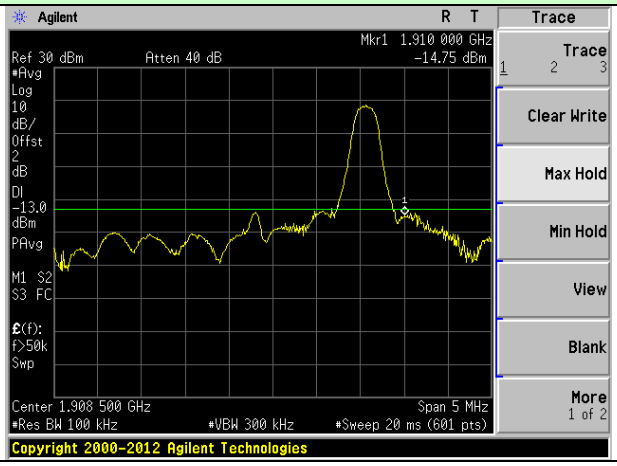
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Middle channel	Middle channel

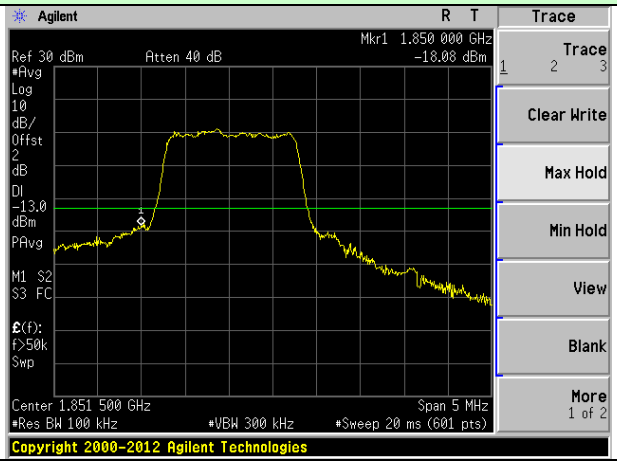
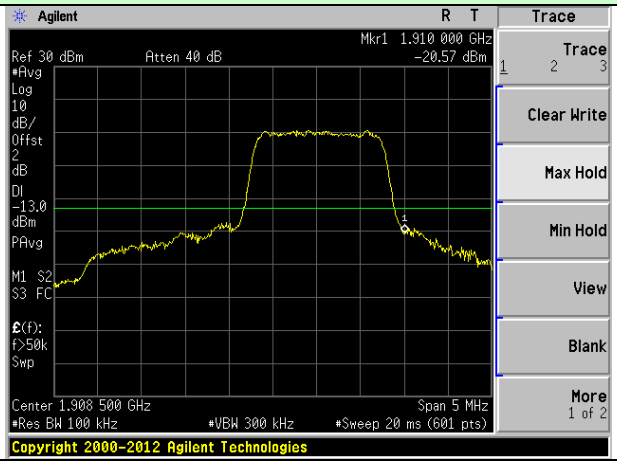
LTE Band 2 (16QAM mode):

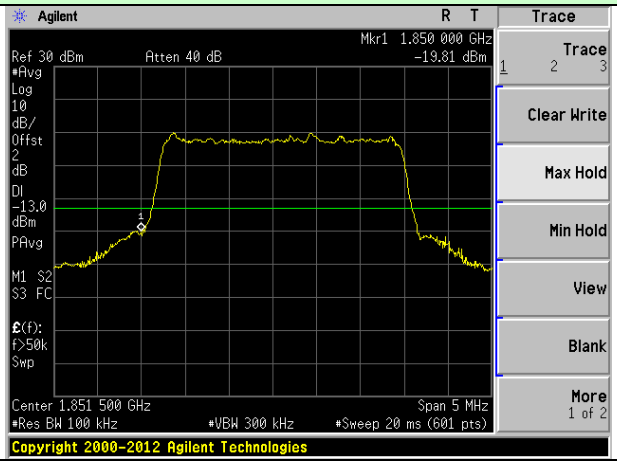
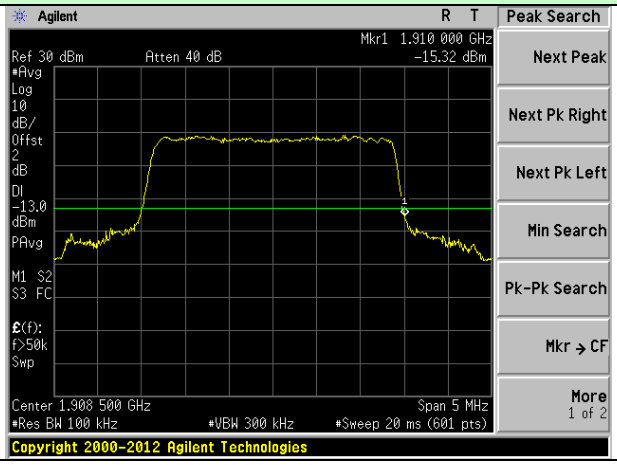
1.4MHz Bandwidth (RB size:1# RB offset:0#)	1.4MHz Bandwidth (RB size:1# RB offset:5#)
	
Lowest channel	Highest channel

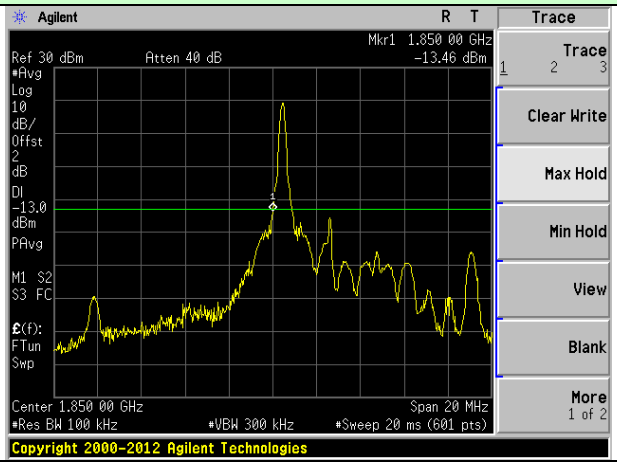
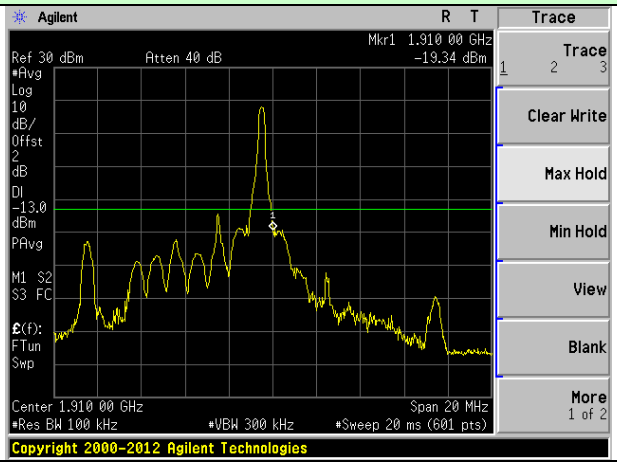
1.4MHz Bandwidth (RB size:3# RB offset:0#)	1.4MHz Bandwidth (RB size:3# RB offset:2#)
	
Lowest channel	Highest channel

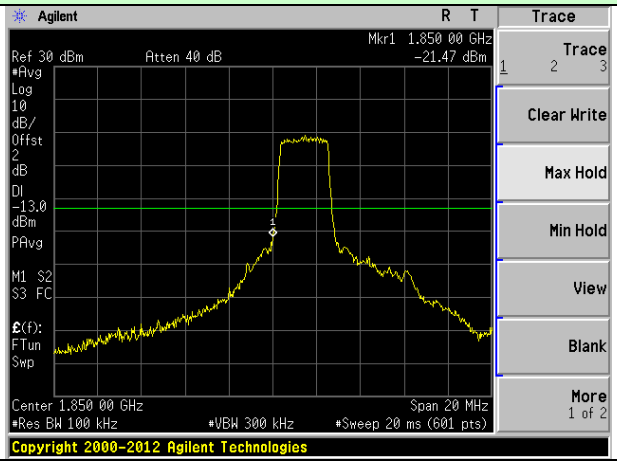
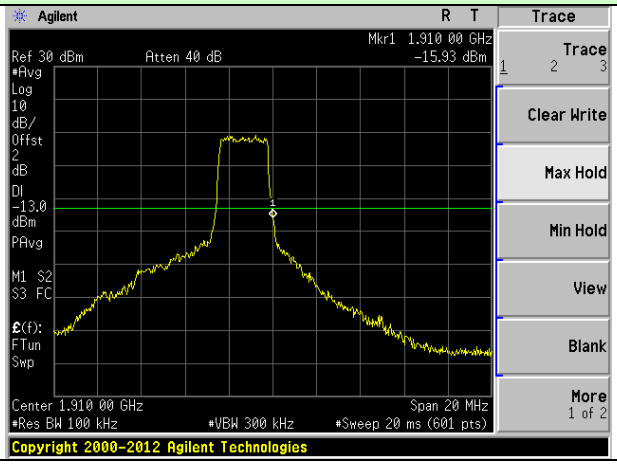
1.4MHz Bandwidth (RB size:6# RB offset:0#)	1.4MHz Bandwidth (RB size:6# RB offset:0#)
	
Lowest channel	Highest channel

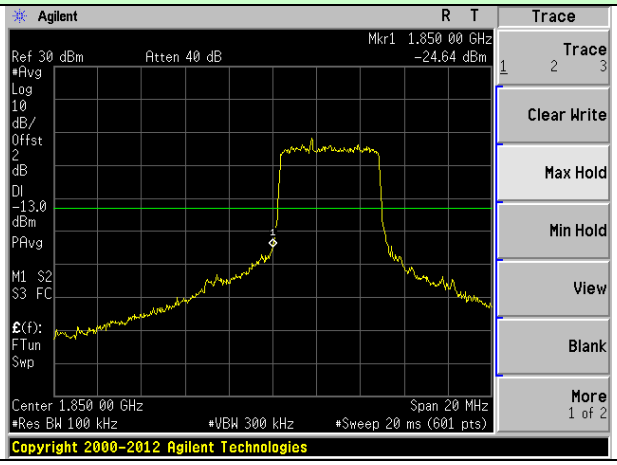
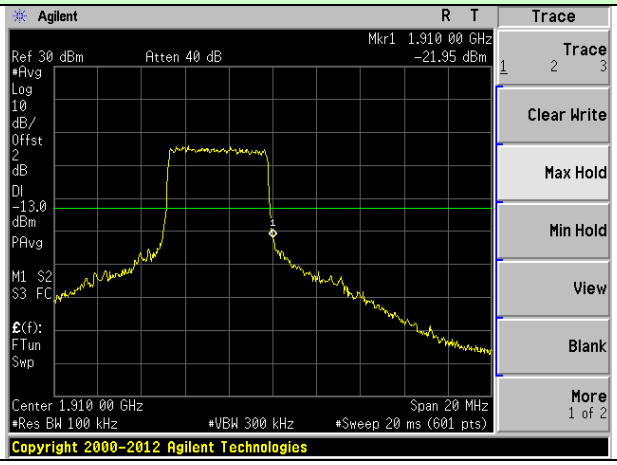
3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:14#)
	
Lowest channel	Highest channel

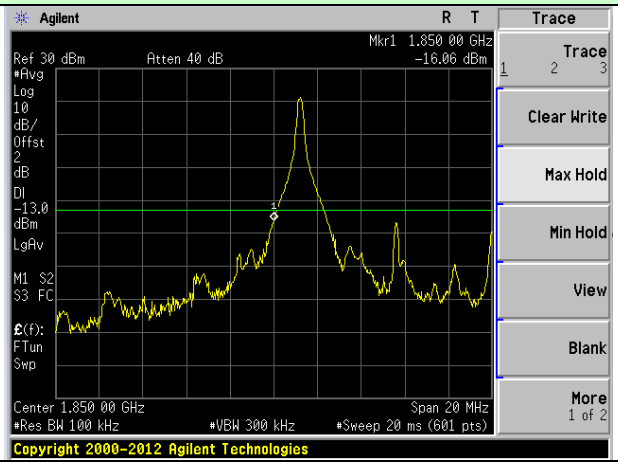
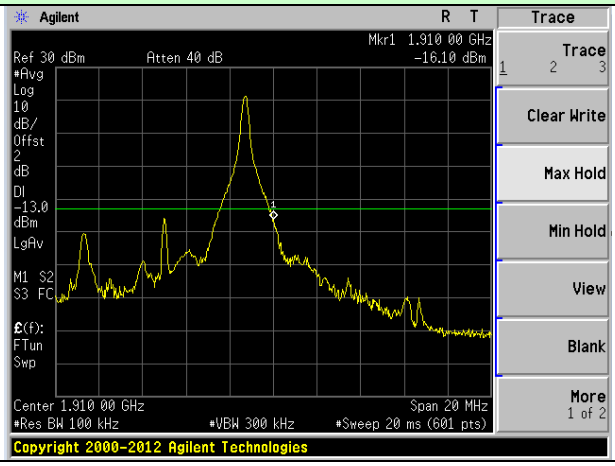
3MHz Bandwidth (RB size:8# RB offset:0#)	3MHz Bandwidth (RB size:8# RB offset:7#)
	
Lowest channel	Highest channel

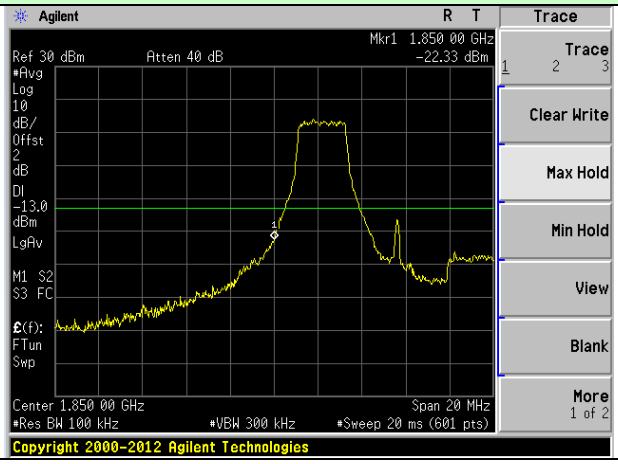
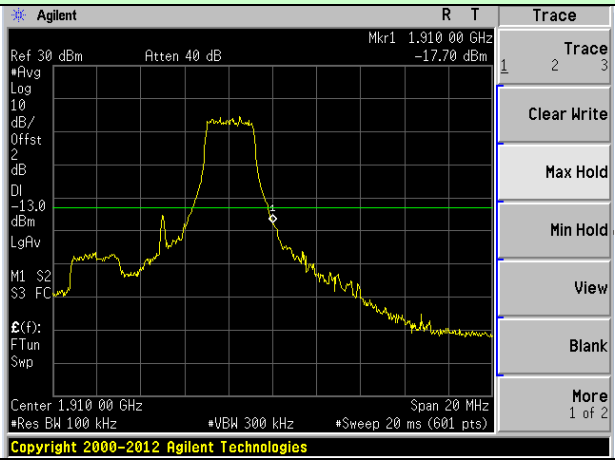
3MHz Bandwidth (RB size:15# RB offset:0#)	3MHz Bandwidth (RB size:15# RB offset:0#)
	
Lowest channel	Highest channel

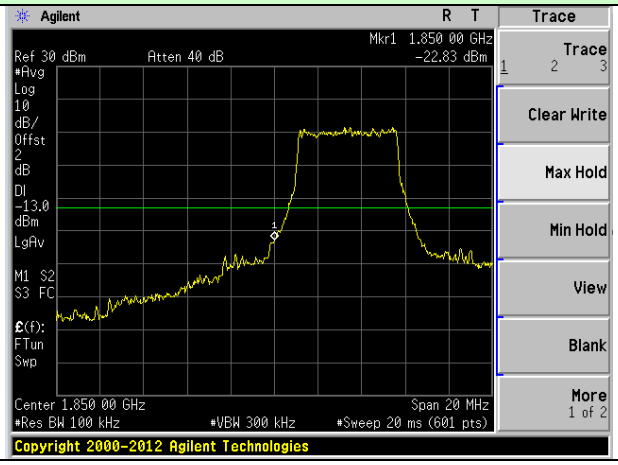
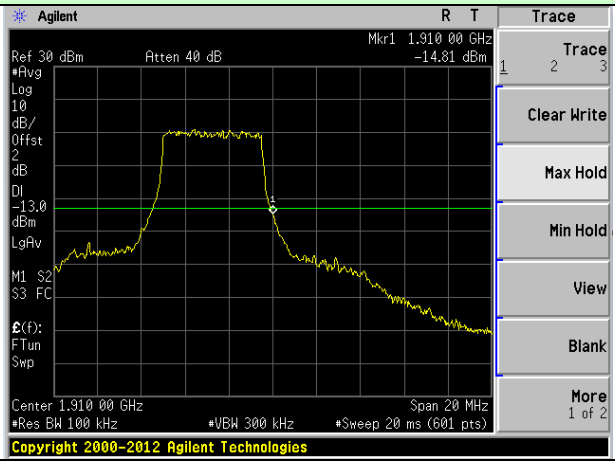
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

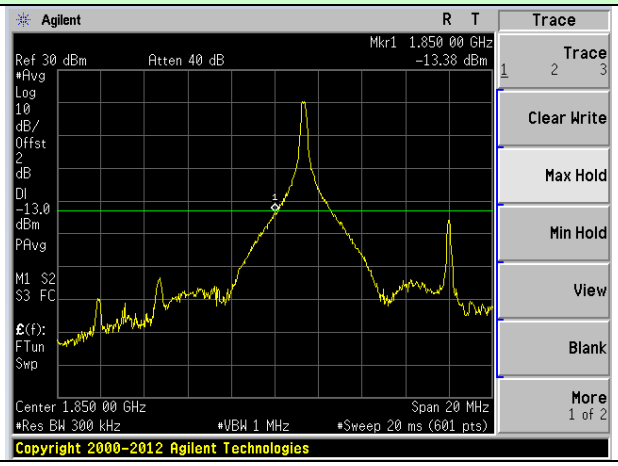
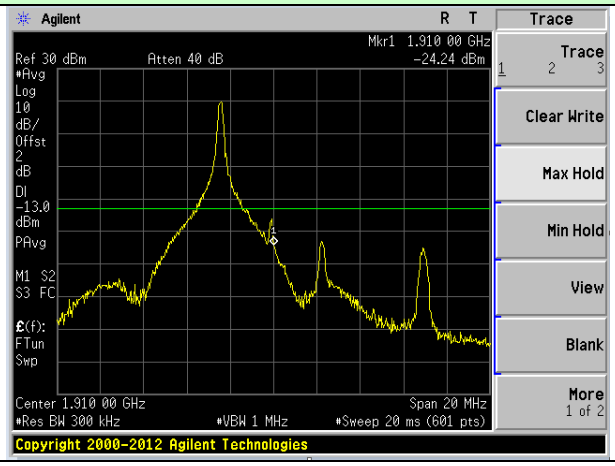
5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

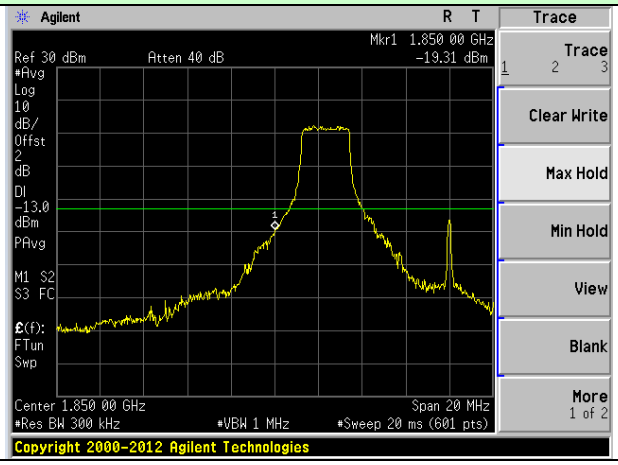
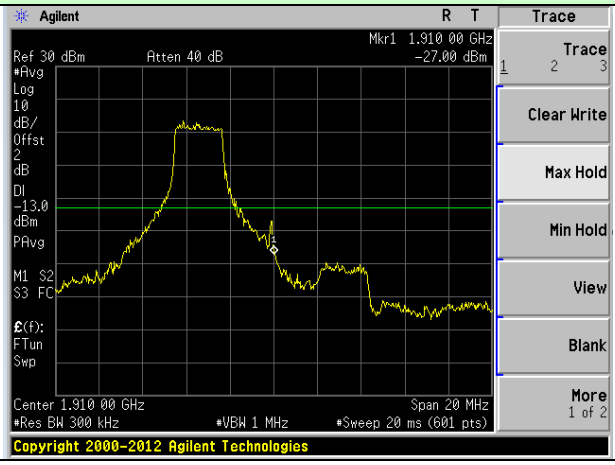
5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

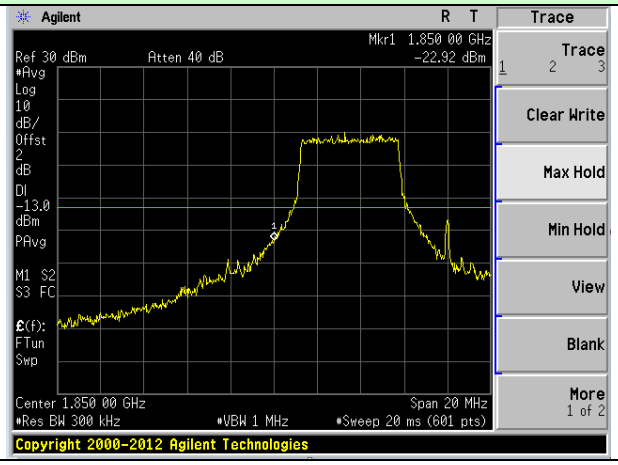
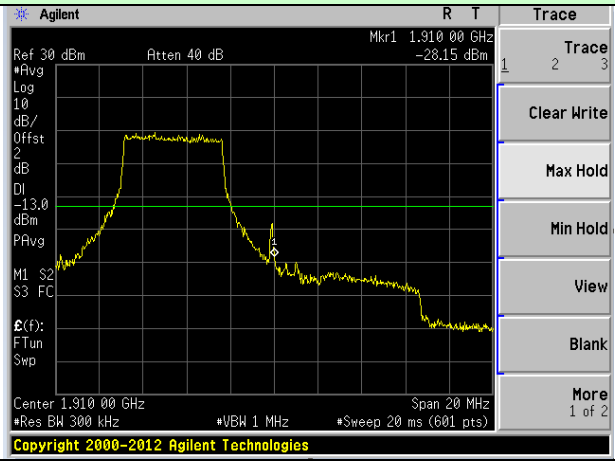
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Lowest channel	Highest channel

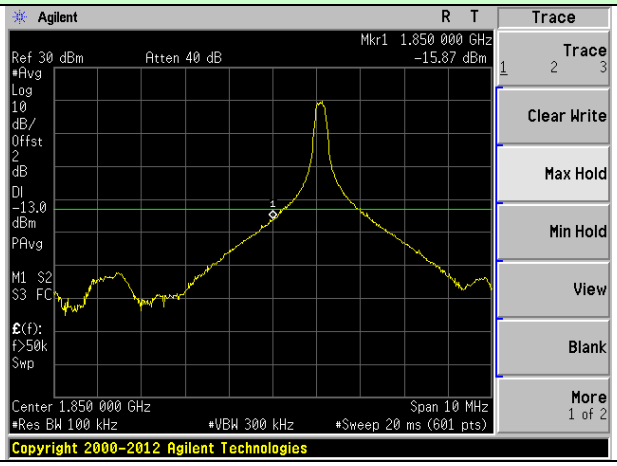
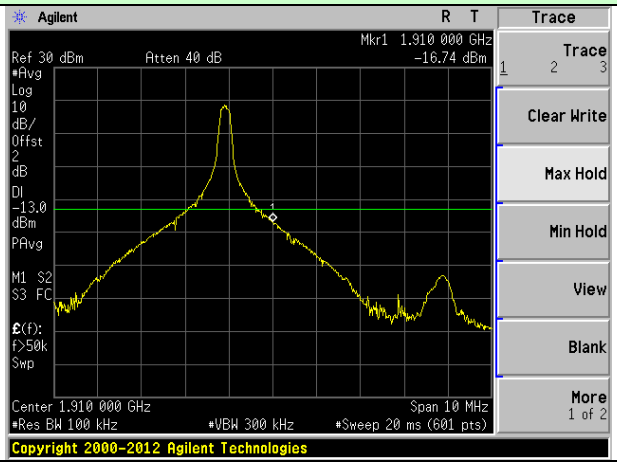
10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Lowest channel	Highest channel

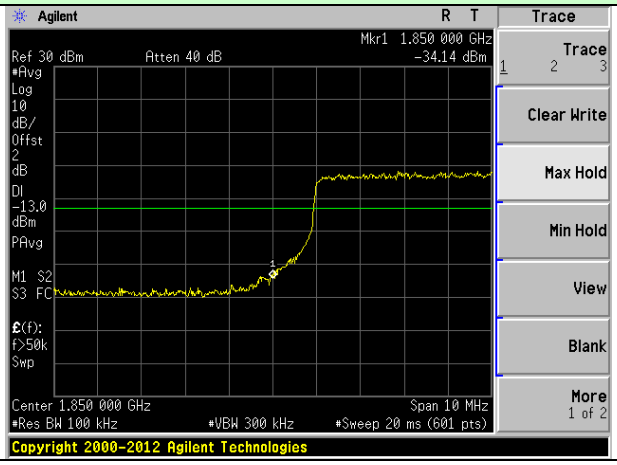
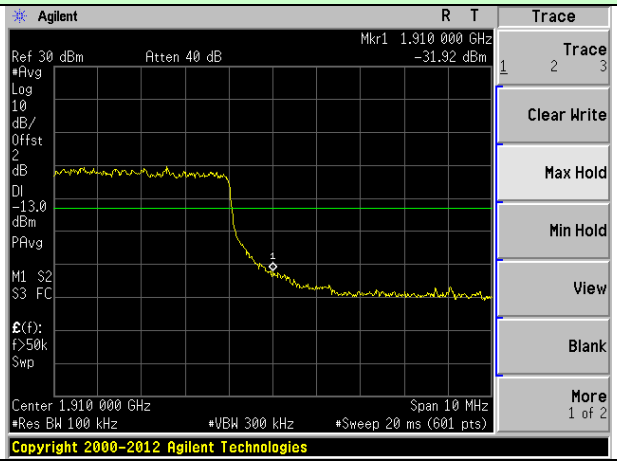
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Lowest channel	Highest channel

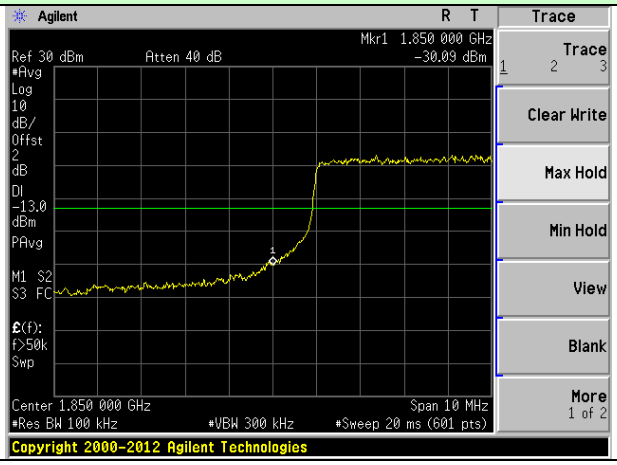
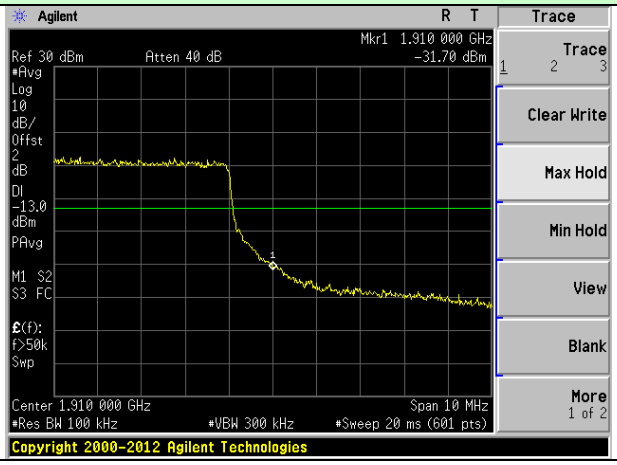
15MHz Bandwidth (RB size:1# RB offset:0#)	15MHz Bandwidth (RB size:1# RB offset:74#)
	
Lowest channel	Highest channel

15MHz Bandwidth (RB size:36# RB offset:0#)	15MHz Bandwidth (RB size:36# RB offset:39#)
	
Lowest channel	Highest channel

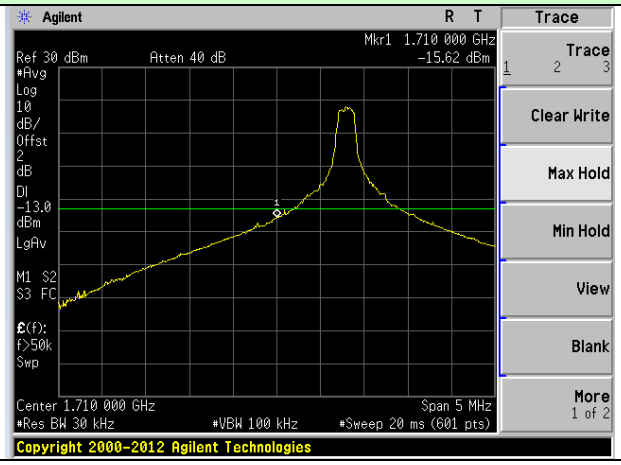
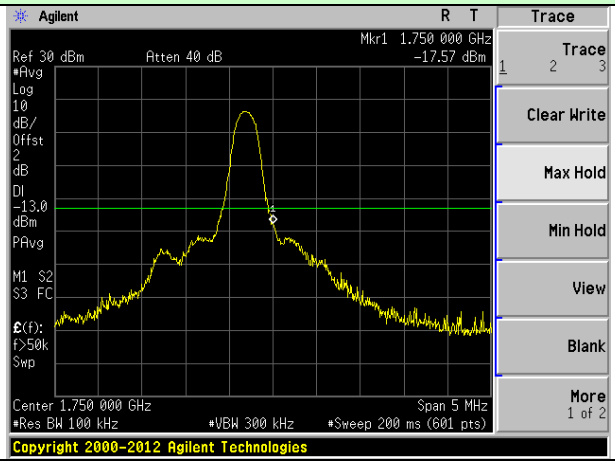
15MHz Bandwidth (RB size:75# RB offset:0#)	15MHz Bandwidth (RB size:75# RB offset:0#)
	
Lowest channel	Highest channel

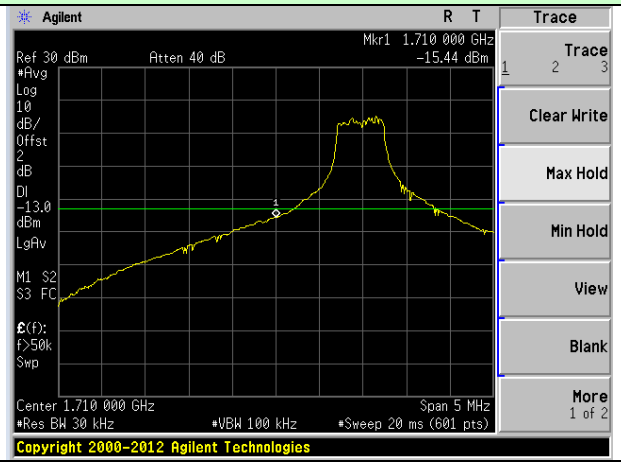
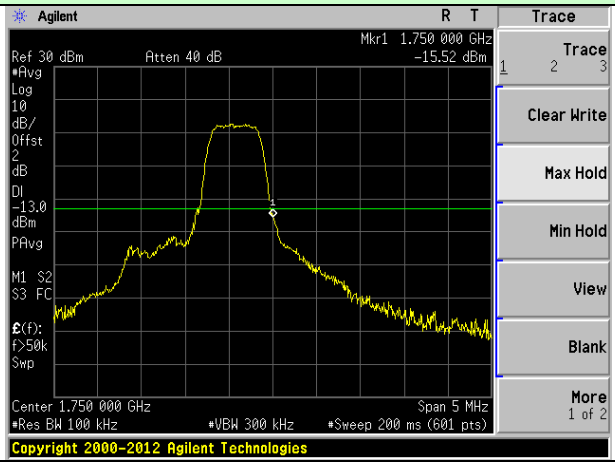
20MHz Bandwidth (RB size:1# RB offset:0#)	20MHz Bandwidth (RB size:1# RB offset:99#)
	
Lowest channel	Highest channel

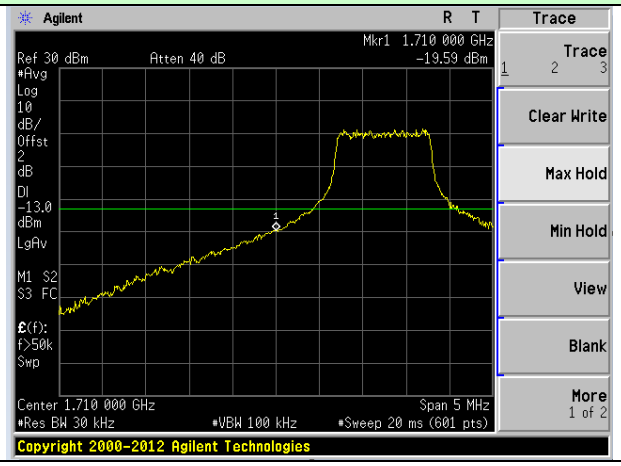
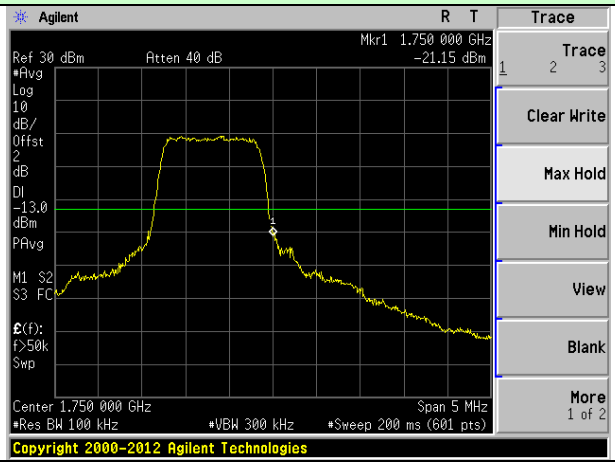
20MHz Bandwidth (RB size:50# RB offset:0#)	20MHz Bandwidth (RB size:50# RB offset:50#)
	
Lowest channel	Highest channel

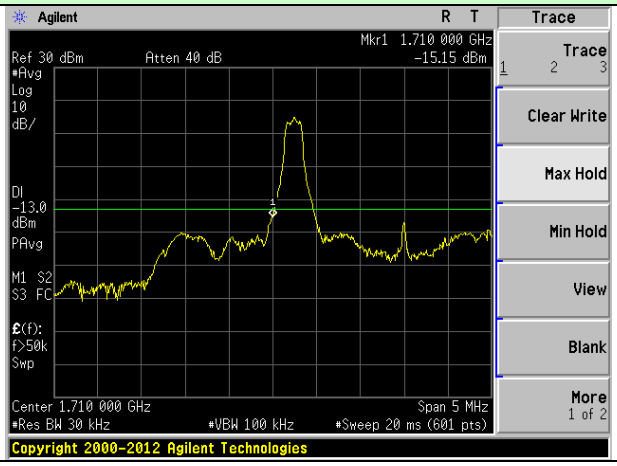
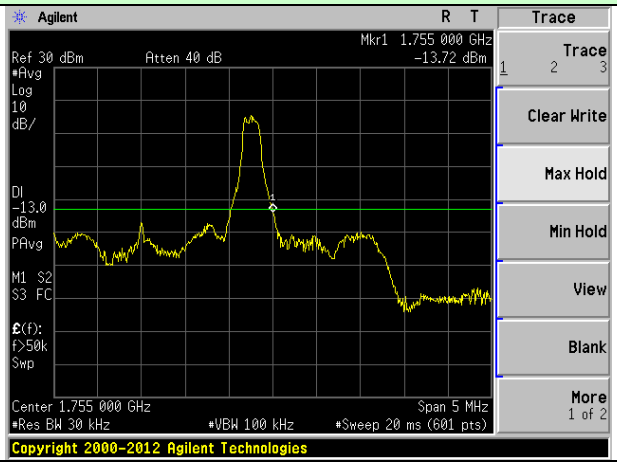
20MHz Bandwidth (RB size:100# RB offset:0#)	20MHz Bandwidth (RB size:100# RB offset:0#)
	
Lowest channel	Highest channel

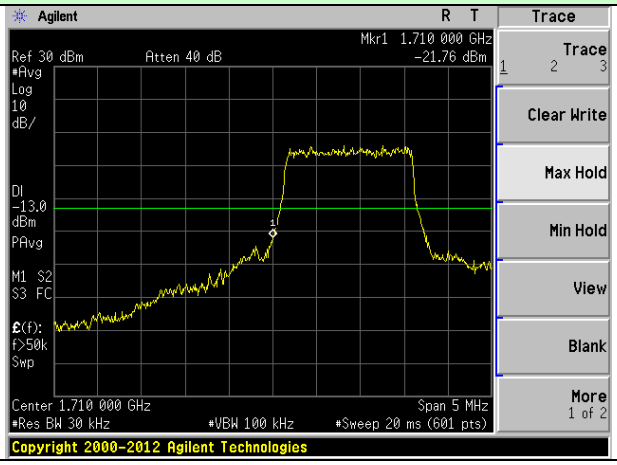
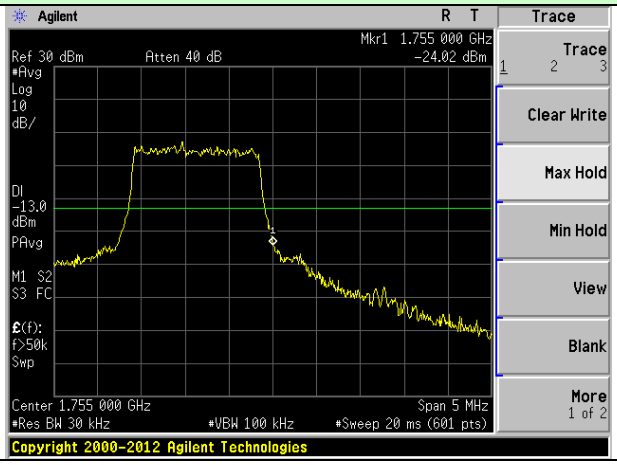
LTE Band 4 (16QAM mode):

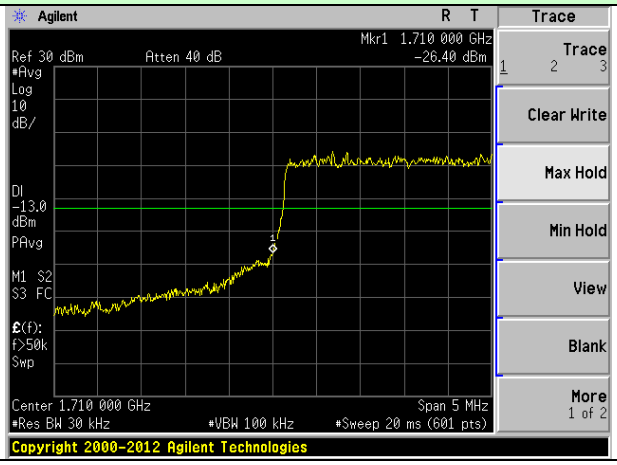
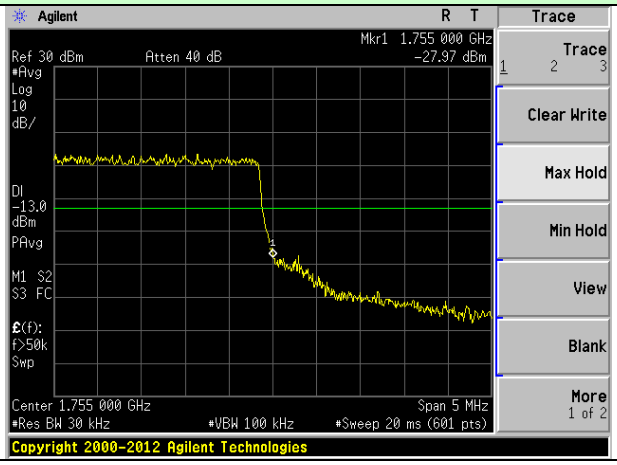
1.4MHz Bandwidth (RB size:1# RB offset:0#)	1.4MHz Bandwidth (RB size:1# RB offset:5#)
	
Lowest channel	Highest channel

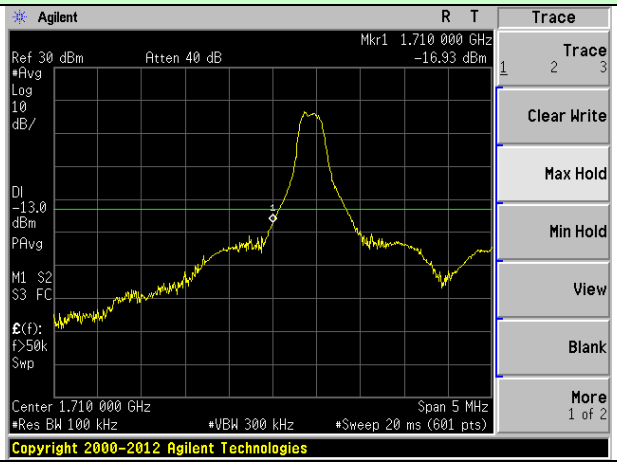
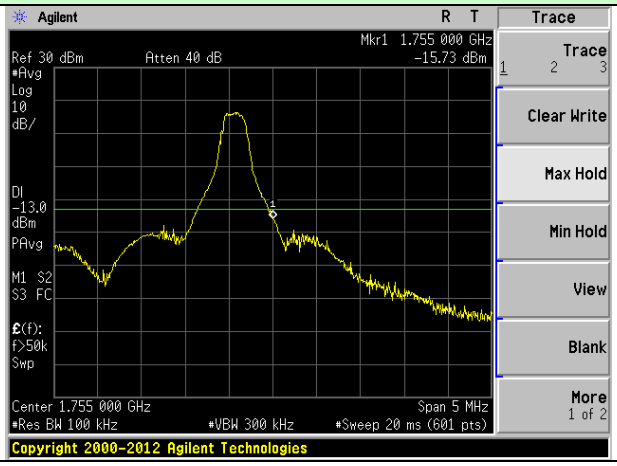
1.4MHz Bandwidth (RB size:3# RB offset:0#)	1.4MHz Bandwidth (RB size:3# RB offset:2#)
	
Lowest channel	Highest channel

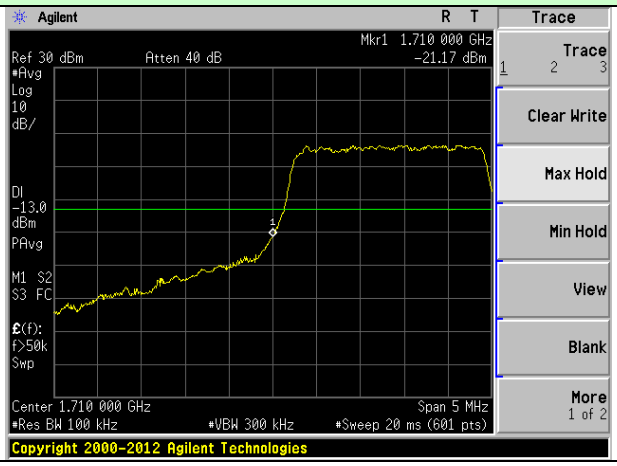
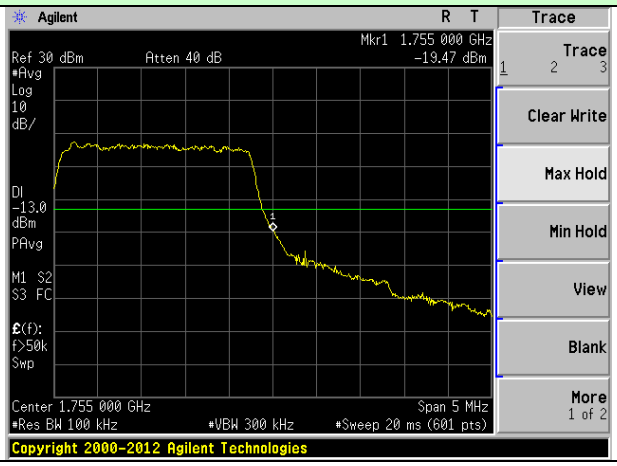
1.4MHz Bandwidth (RB size:6# RB offset:0#)	1.4MHz Bandwidth (RB size:6# RB offset:0#)
	
Lowest channel	Highest channel

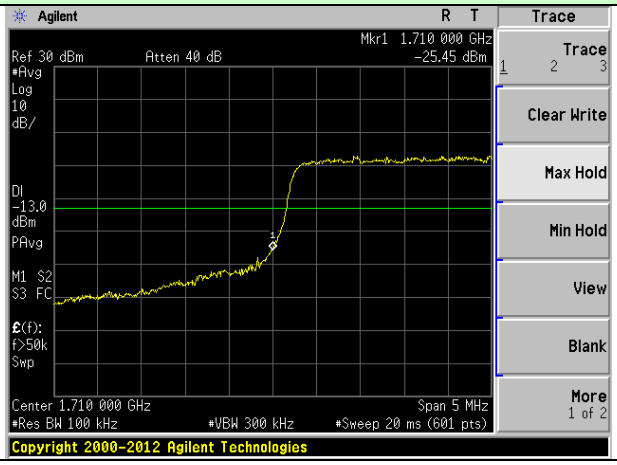
3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:14#)
	
Lowest channel	Highest channel

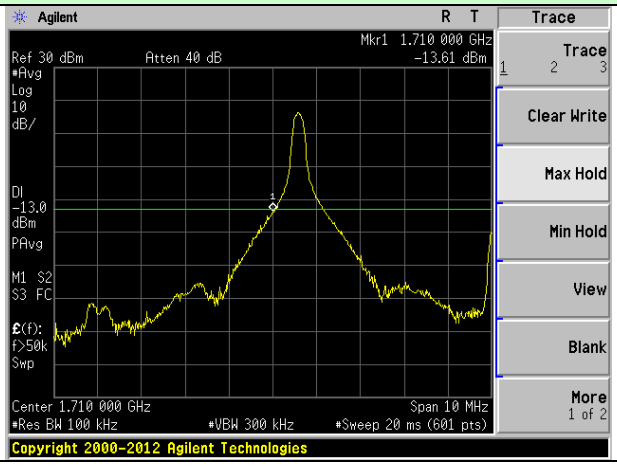
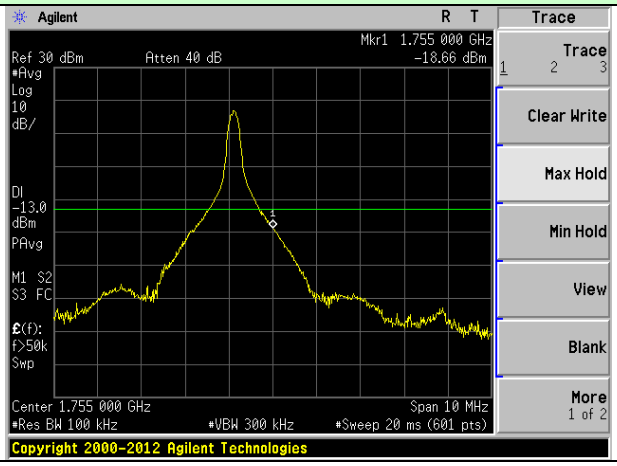
3MHz Bandwidth (RB size:8# RB offset:0#)	3MHz Bandwidth (RB size:8# RB offset:7#)
	
Lowest channel	Highest channel

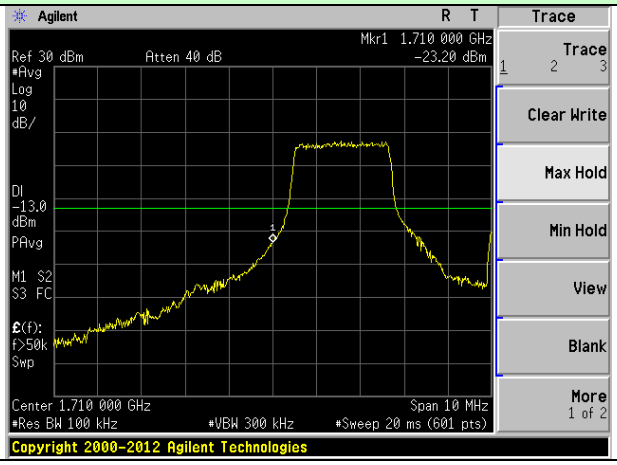
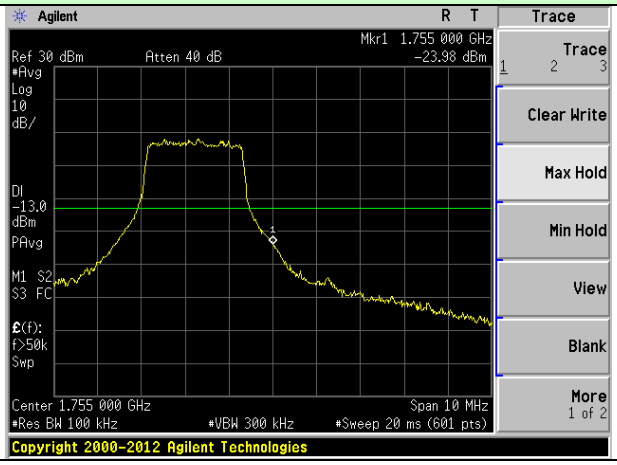
3MHz Bandwidth (RB size:15# RB offset:0#)	3MHz Bandwidth (RB size:15# RB offset:0#)
	
Lowest channel	Highest channel

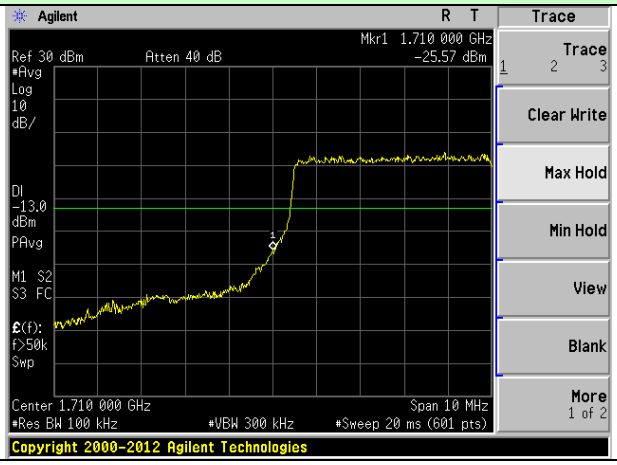
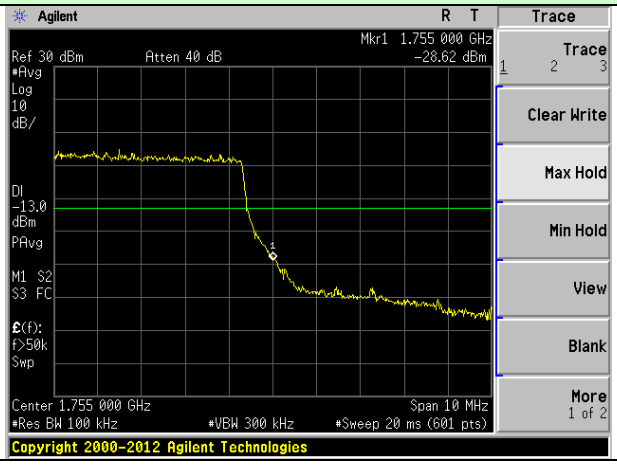
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

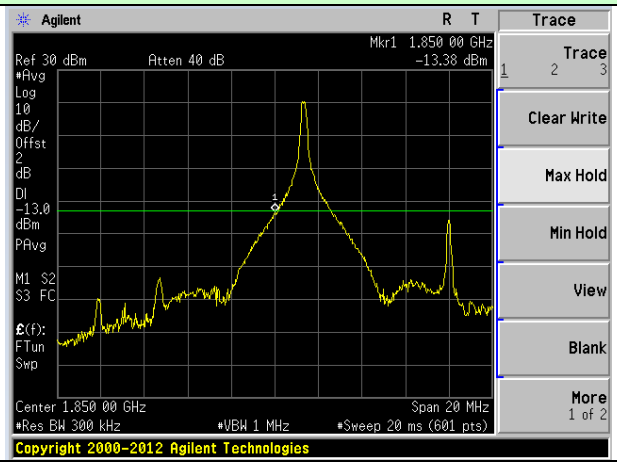
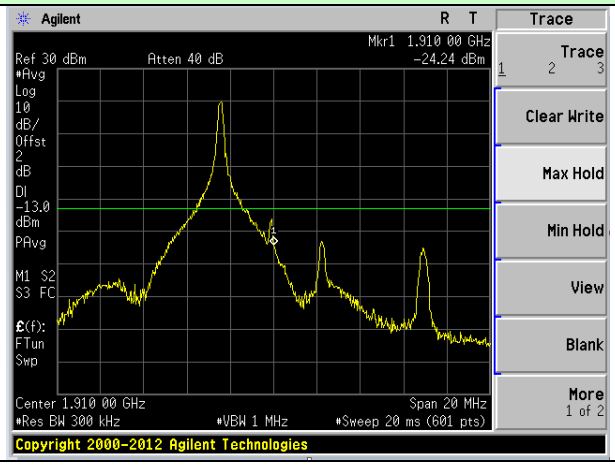
5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

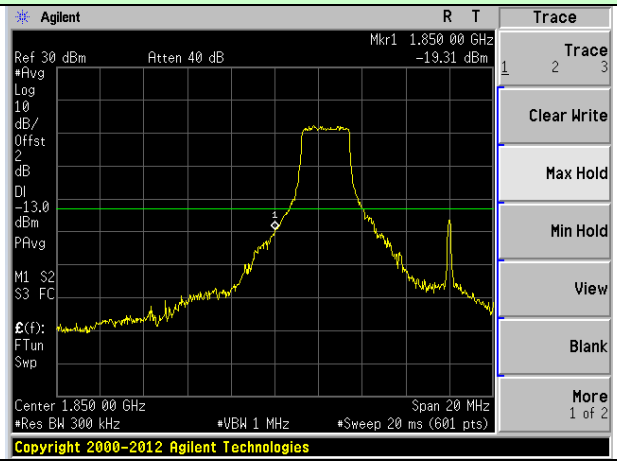
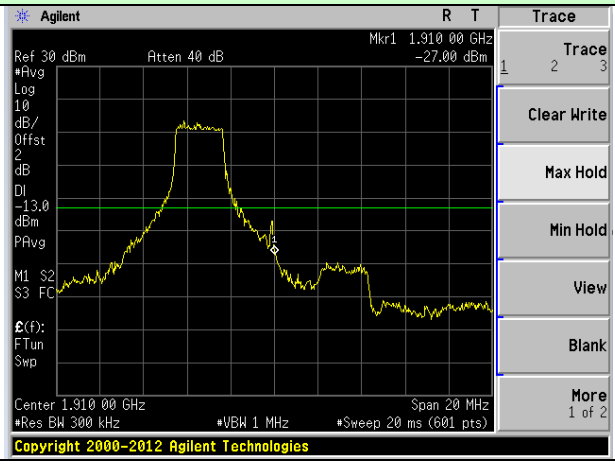
5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

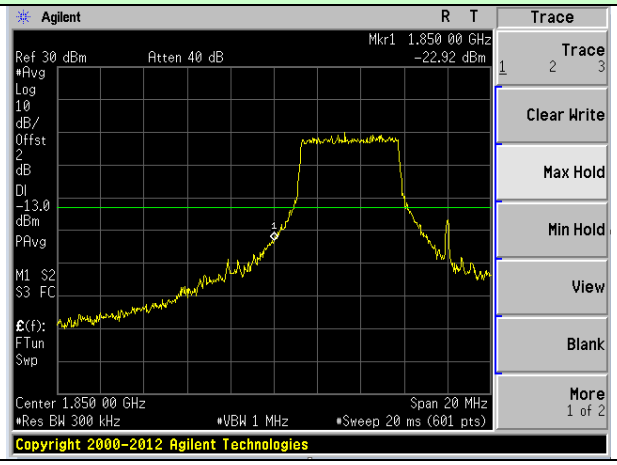
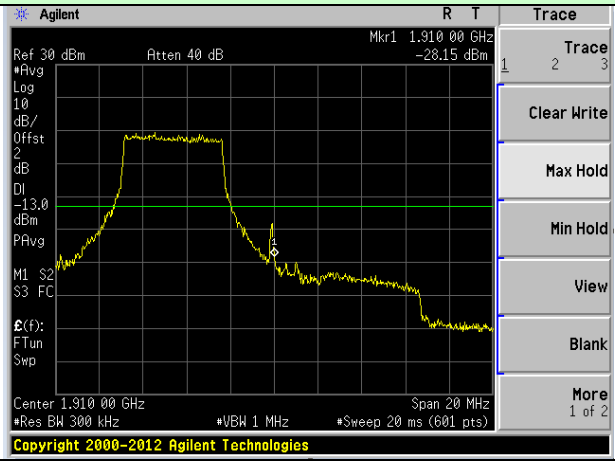
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Lowest channel	Highest channel

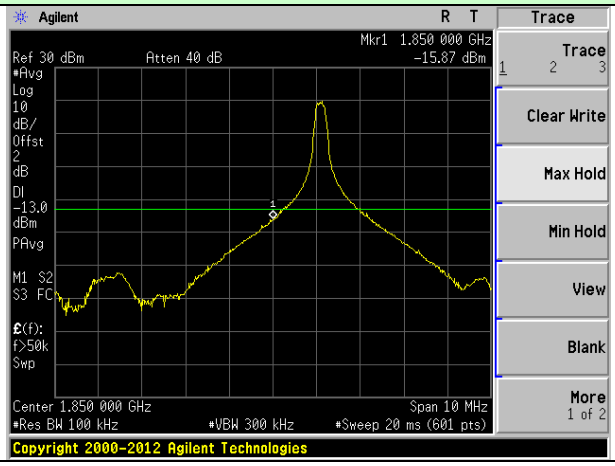
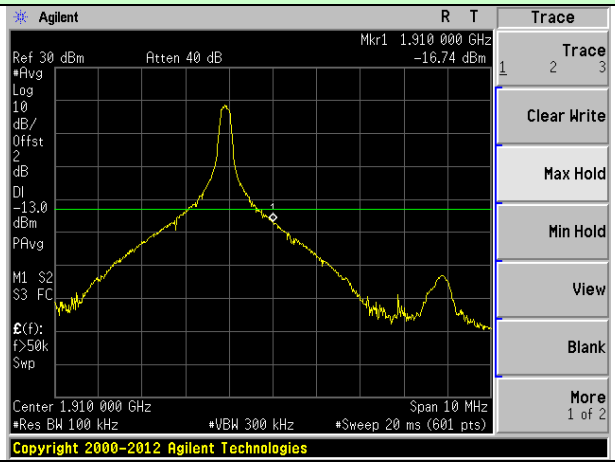
10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Lowest channel	Highest channel

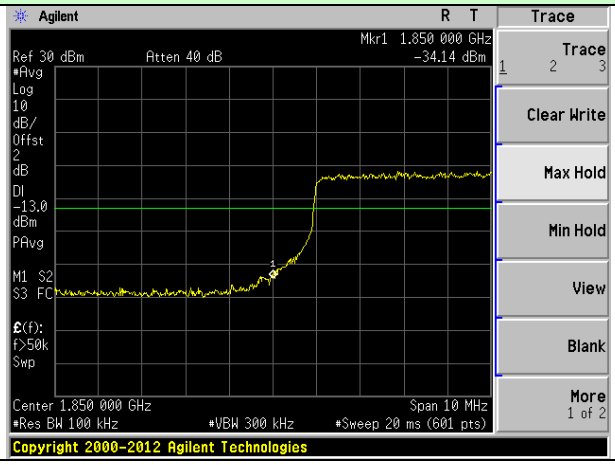
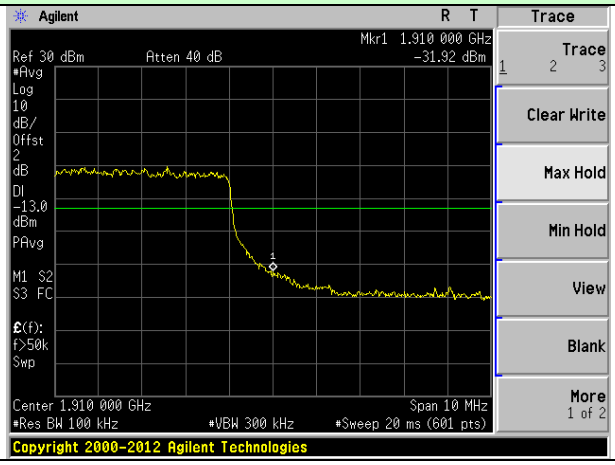
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Lowest channel	Highest channel

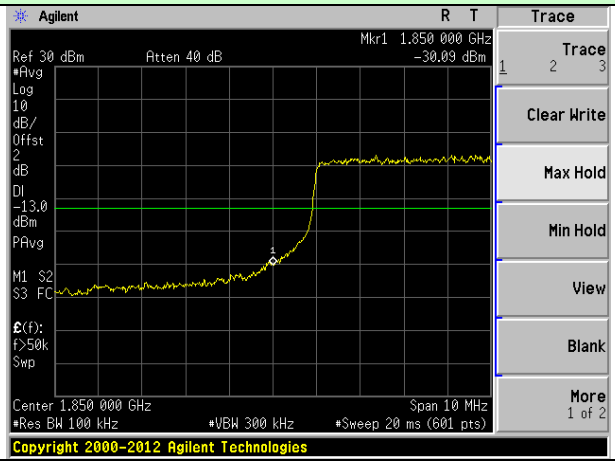
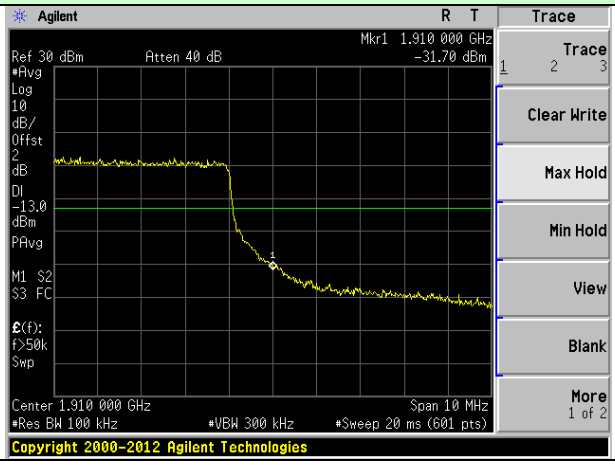
15MHz Bandwidth (RB size:1# RB offset:0#)	15MHz Bandwidth (RB size:1# RB offset:74#)
	
Lowest channel	Highest channel

15MHz Bandwidth (RB size:36# RB offset:0#)	15MHz Bandwidth (RB size:36# RB offset:39#)
	
Lowest channel	Highest channel

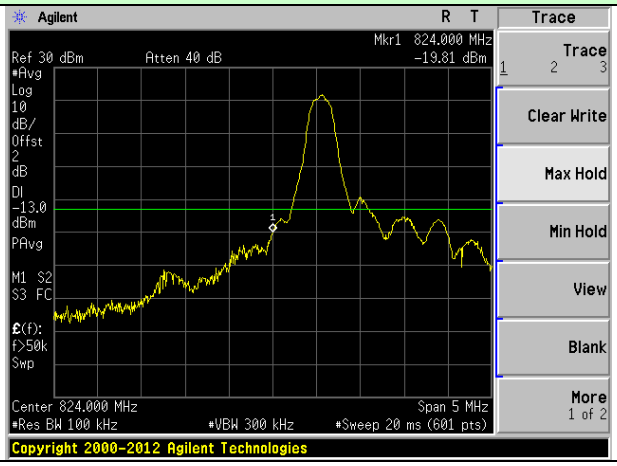
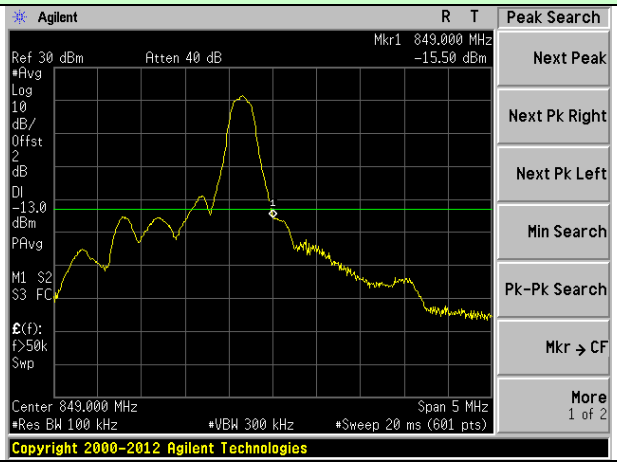
15MHz Bandwidth (RB size:75# RB offset:0#)	15MHz Bandwidth (RB size:75# RB offset:0#)
	
Lowest channel	Highest channel

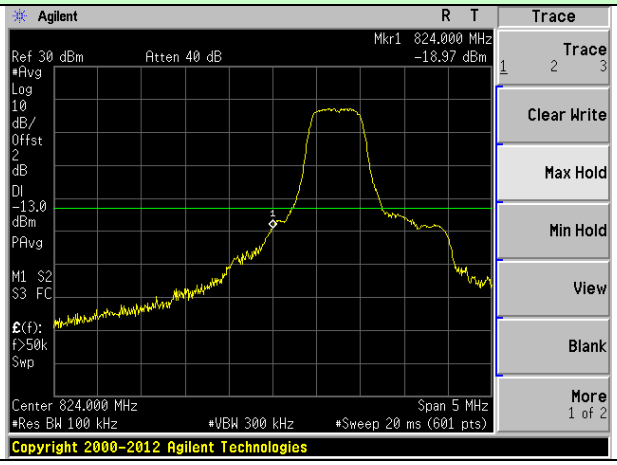
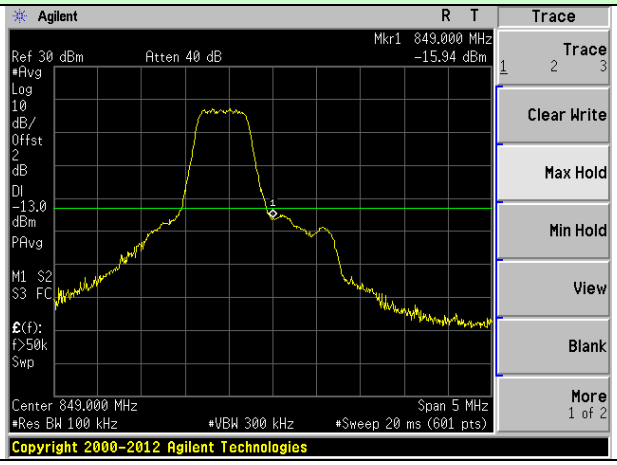
20MHz Bandwidth (RB size:1# RB offset:0#)	20MHz Bandwidth (RB size:1# RB offset:99#)
	
Lowest channel	Highest channel

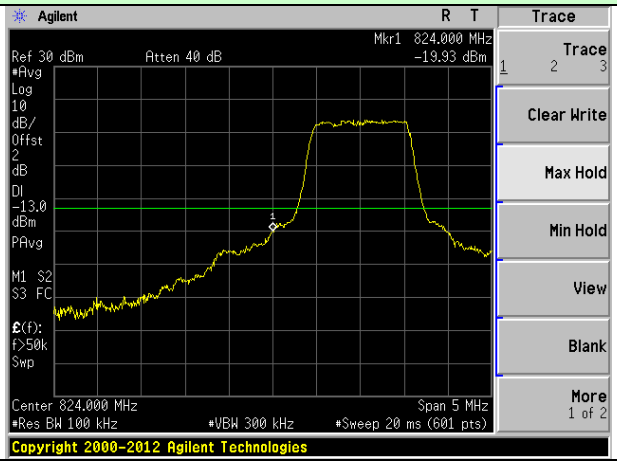
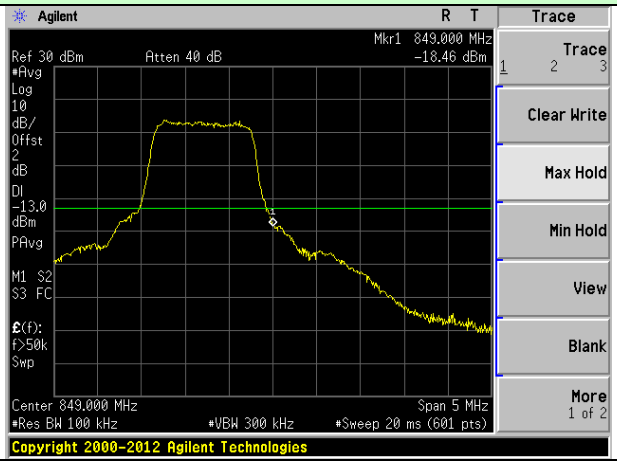
20MHz Bandwidth (RB size:50# RB offset:0#)	20MHz Bandwidth (RB size:50# RB offset:50#)
	
Lowest channel	Highest channel

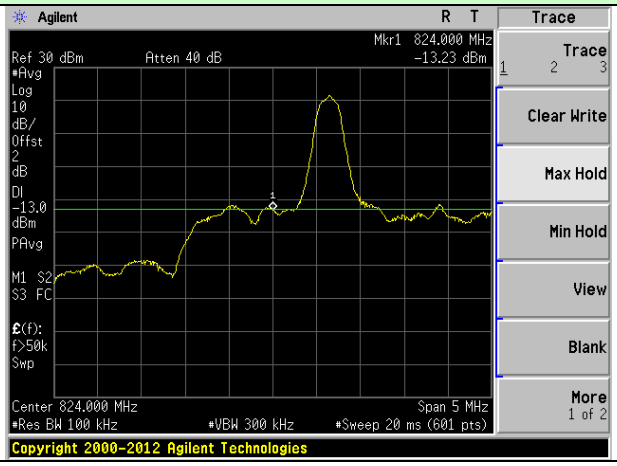
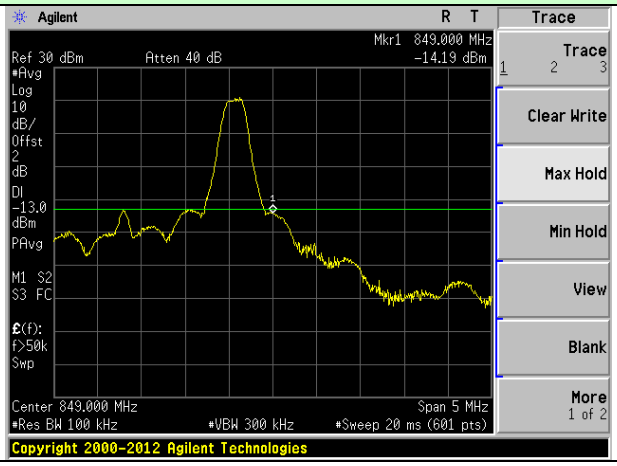
20MHz Bandwidth (RB size:100# RB offset:0#)	20MHz Bandwidth (RB size:100# RB offset:0#)
	
Lowest channel	Highest channel

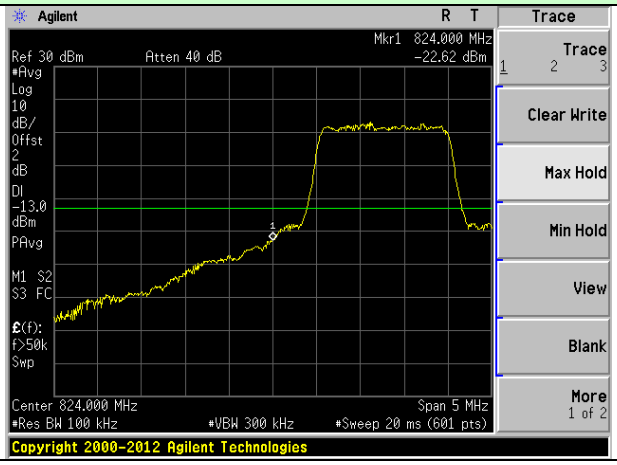
LTE Band 5 (16QAM mode):

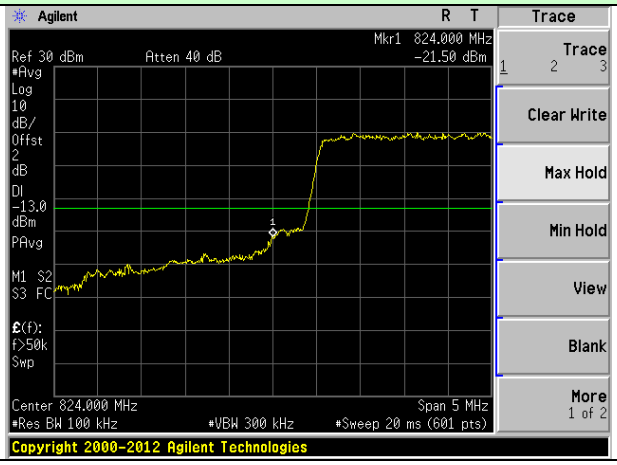
1.4MHz Bandwidth (RB size:1# RB offset:0#)	1.4MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

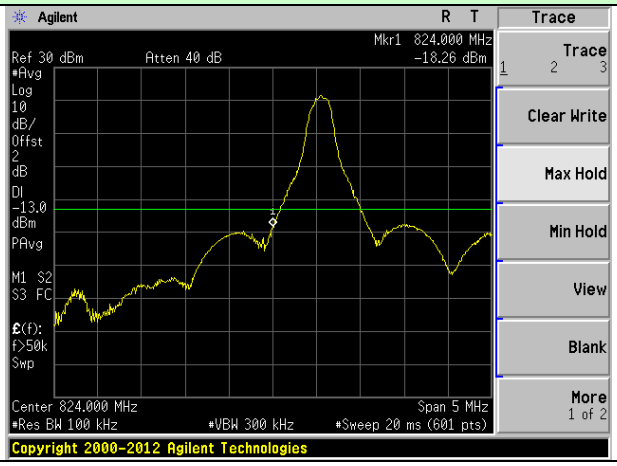
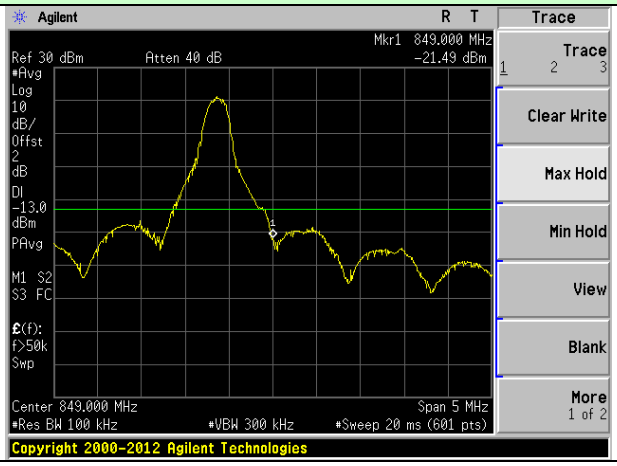
1.4MHz Bandwidth (RB size:12# RB offset:0#)	1.4MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

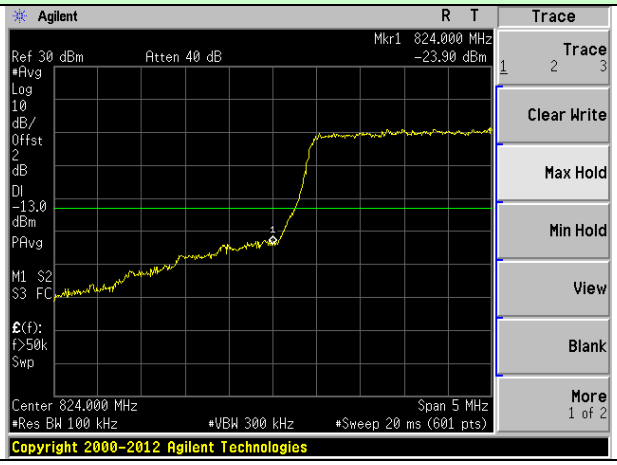
1.4MHz Bandwidth (RB size:25# RB offset:0#)	1.4MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

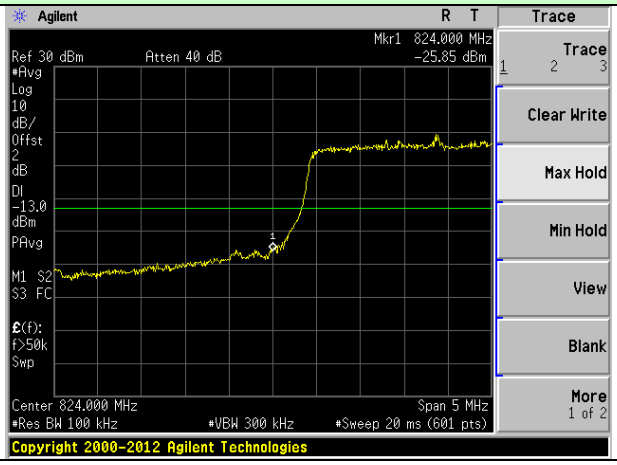
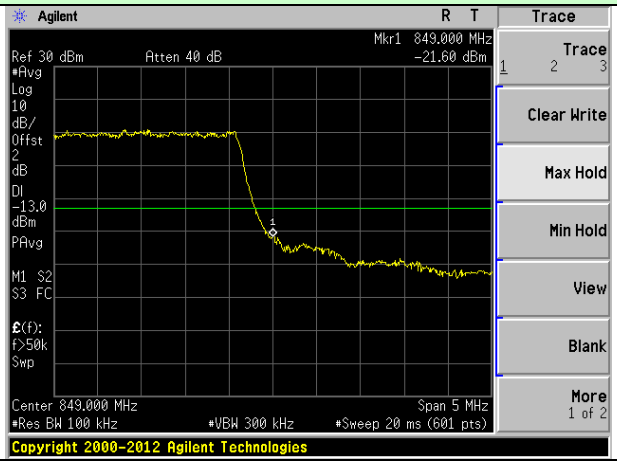
3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:49#)
	
Lowest channel	Highest channel

3MHz Bandwidth (RB size:25# RB offset:0#)	3MHz Bandwidth (RB size:25# RB offset:25#)
	
Lowest channel	Highest channel

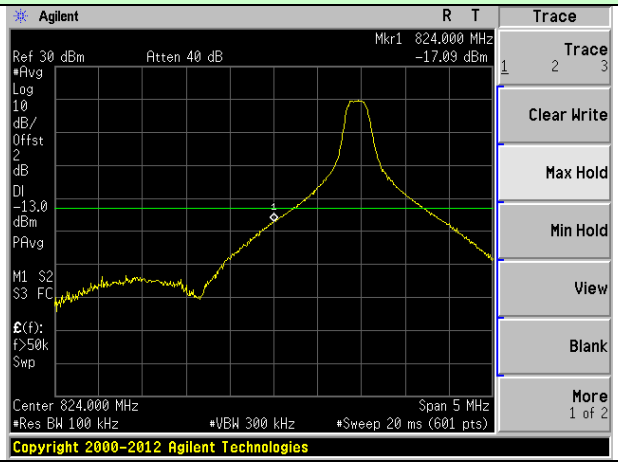
3MHz Bandwidth (RB size:50# RB offset:0#)	3MHz Bandwidth (RB size:50# RB offset:0#)
	
Lowest channel	Highest channel

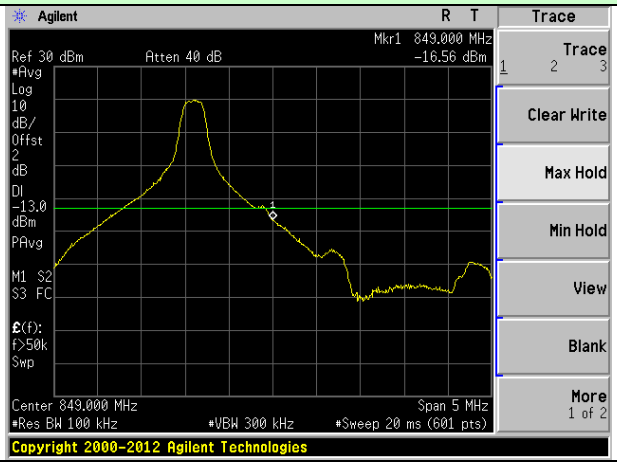
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:74#)
	
Lowest channel	Highest channel

5MHz Bandwidth (RB size:36# RB offset:0#)	5MHz Bandwidth (RB size:36# RB offset:39#)
	
Lowest channel	Highest channel

5MHz Bandwidth (RB size:75# RB offset:0#)	5MHz Bandwidth (RB size:75# RB offset:0#)
	
Lowest channel	Highest channel

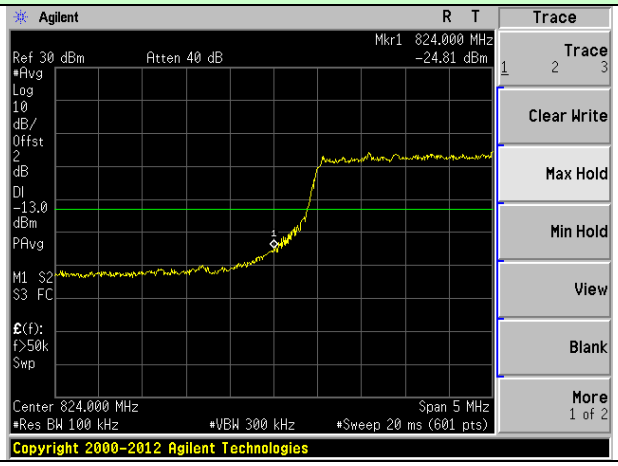
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:99#)





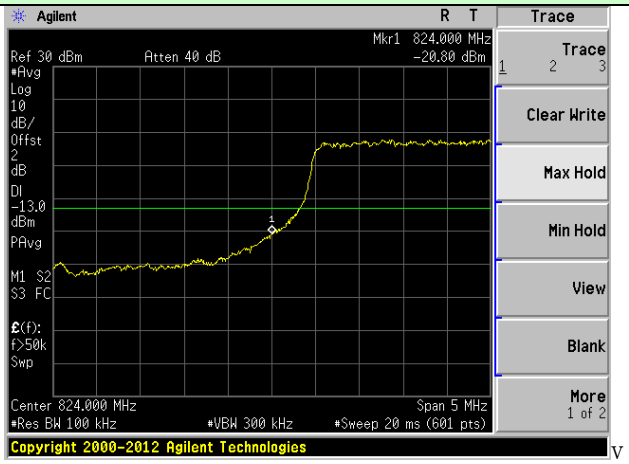
Lowest channel | Highest channel

10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:50#)



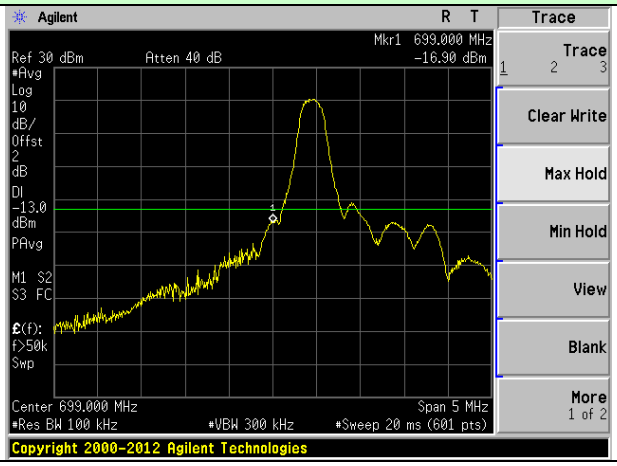
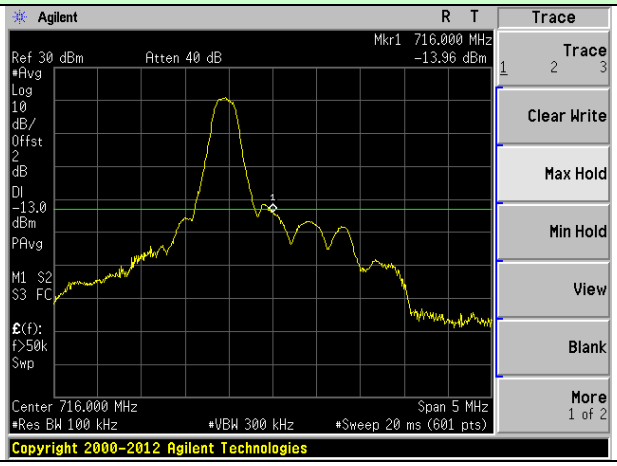
Lowest channel | Highest channel

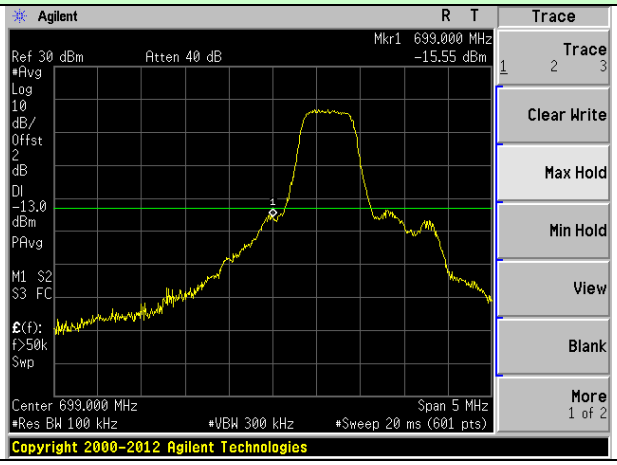
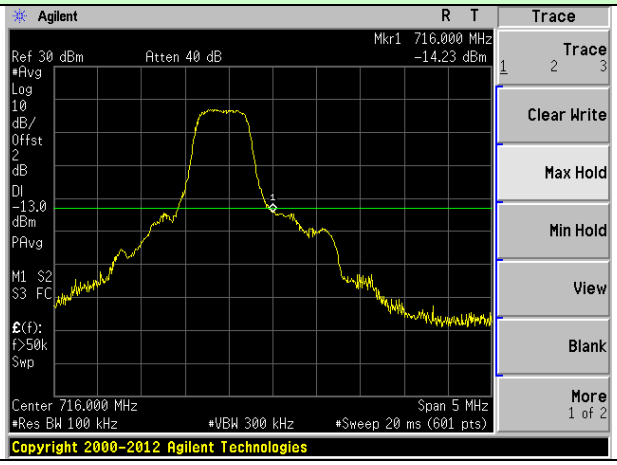
10MHz Bandwidth (RB size:100# RB offset:0#)	10MHz Bandwidth (RB size:100# RB offset:0#)

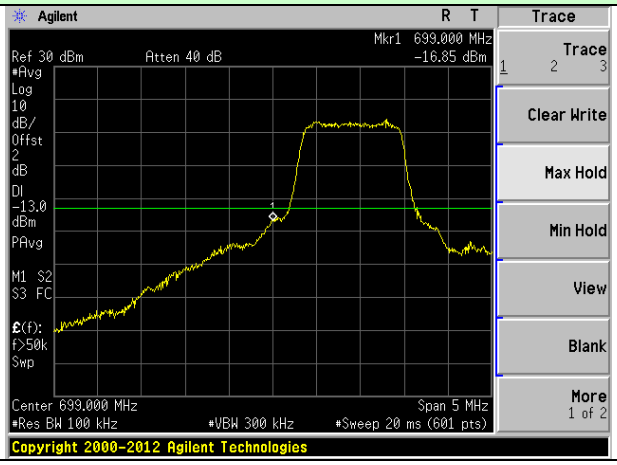
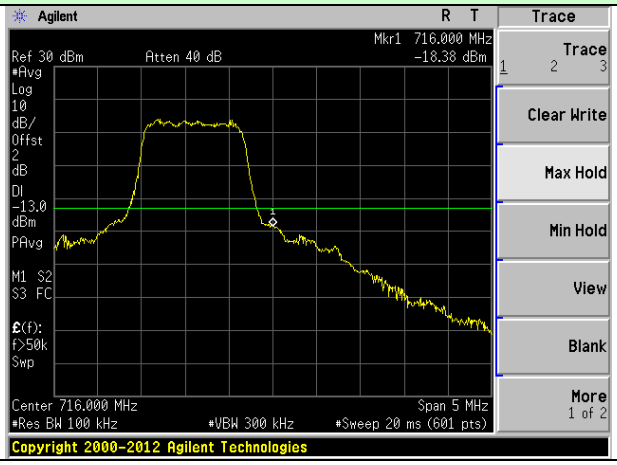


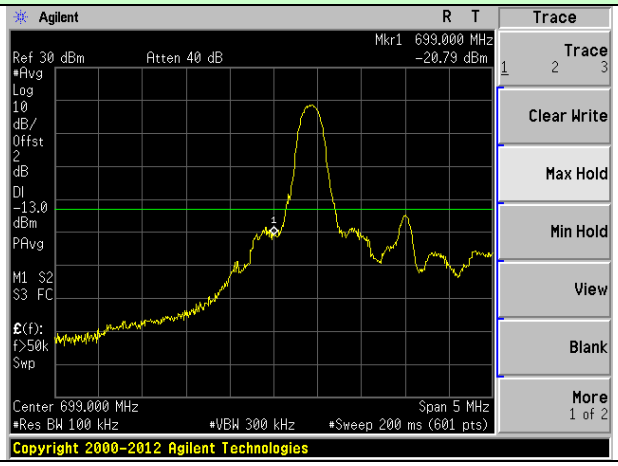
Lowest channel | Highest channel

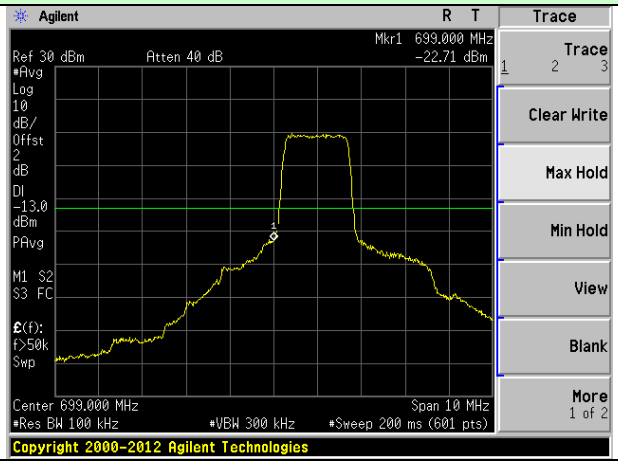
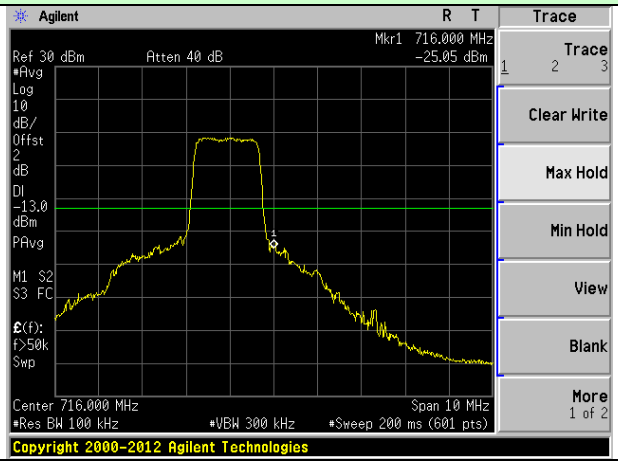
LTE Band 12 (16QAM mode):

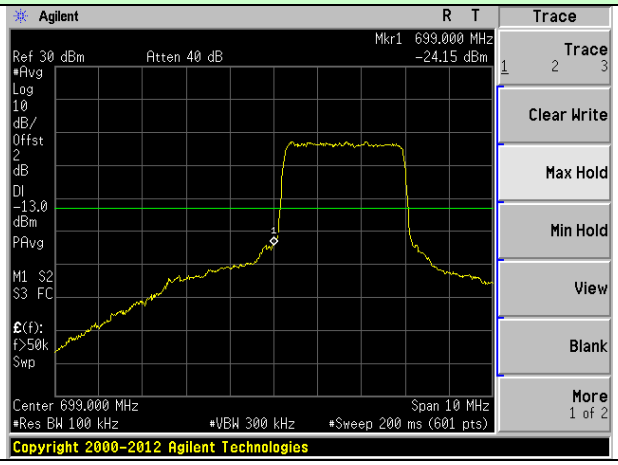
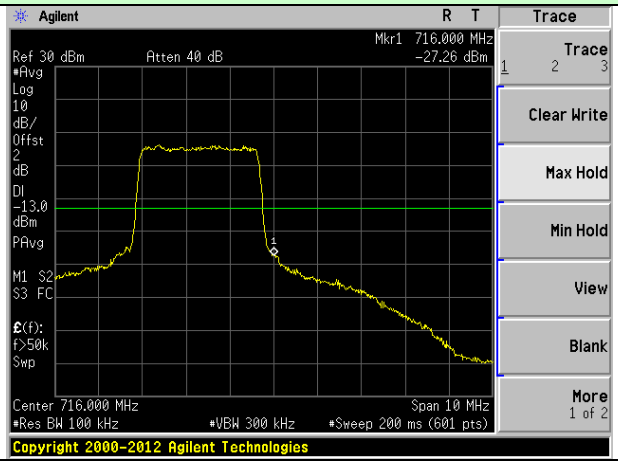
1.4MHz Bandwidth (RB size:1# RB offset:0#)	1.4MHz Bandwidth (RB size:1# RB offset:5#)
	
Lowest channel	Highest channel

1.4MHz Bandwidth (RB size:3# RB offset:0#)	1.4MHz Bandwidth (RB size:3# RB offset:2#)
	
Lowest channel	Highest channel

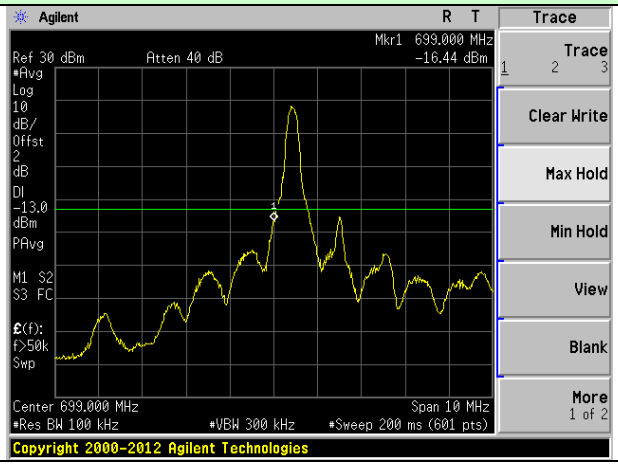
1.4MHz Bandwidth (RB size 6# RB offset:0#)	1.4MHz Bandwidth (RB size:6# RB offset:0#)
	
Lowest channel	Highest channel

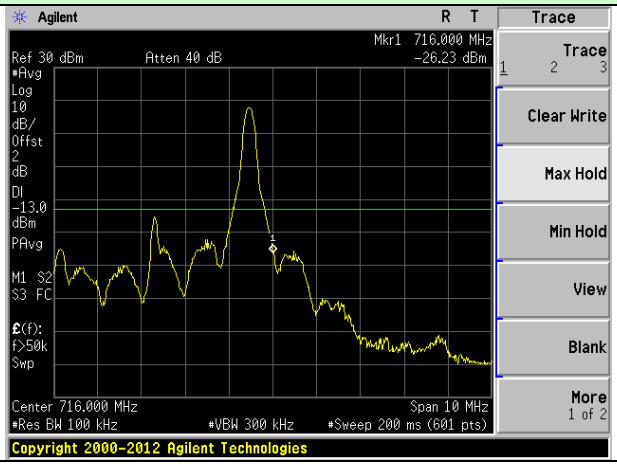
3MHz Bandwidth (RB size:1# RB offset:0#)	3MHz Bandwidth (RB size:1# RB offset:14#)
	
Lowest channel	Highest channel

3MHz Bandwidth (RB size:8# RB offset:0#)	3MHz Bandwidth (RB size:8# RB offset:7#)
	
Lowest channel	Highest channel

3MHz Bandwidth (RB size:15# RB offset:0#)	3MHz Bandwidth (RB size:15# RB offset:0#)
	
Lowest channel	Highest channel

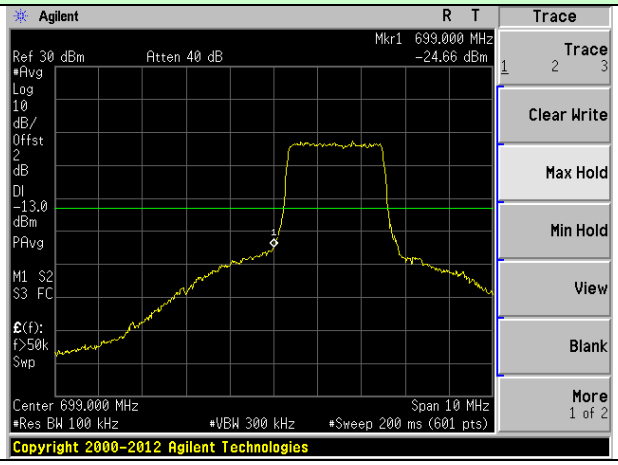
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)

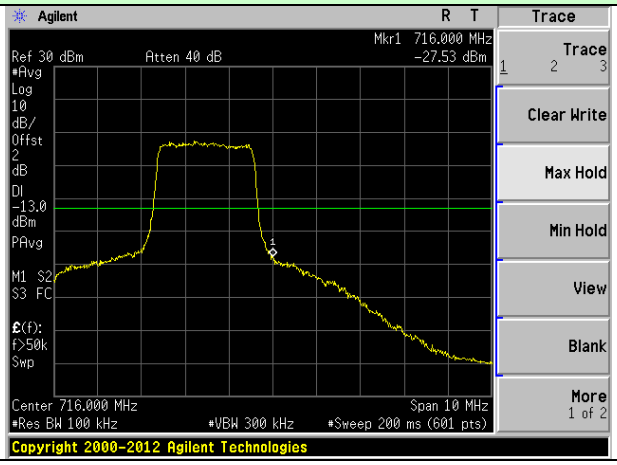




Lowest channel | Highest channel

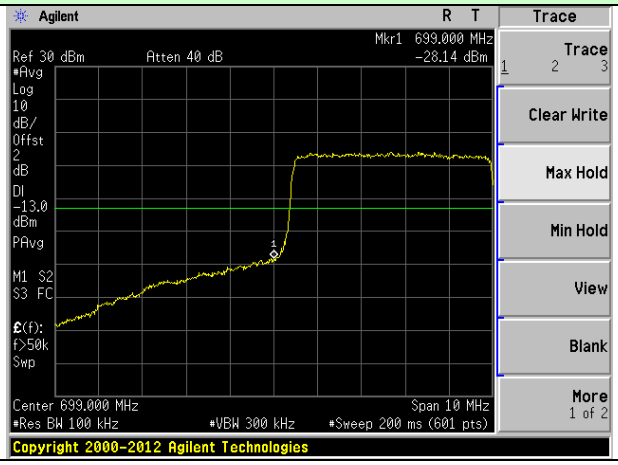
5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)

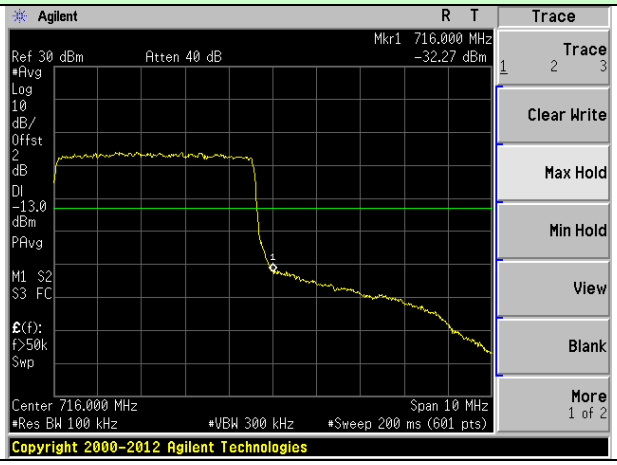




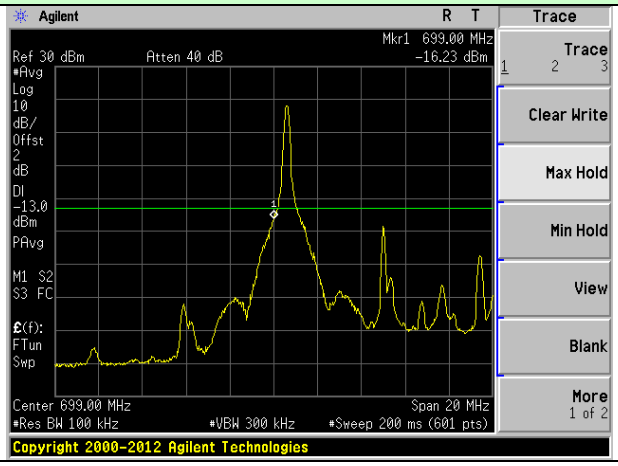
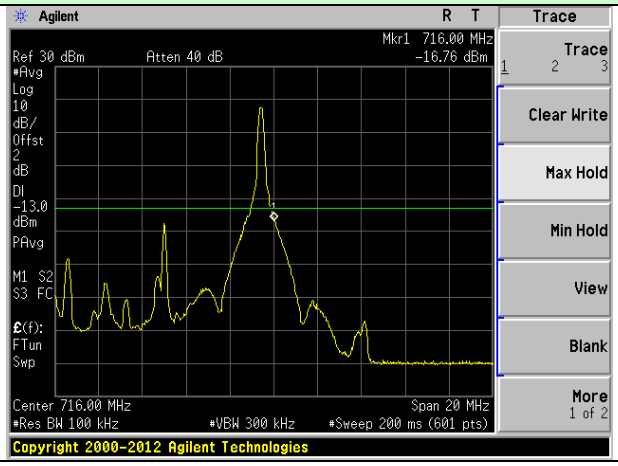
Lowest channel | Highest channel

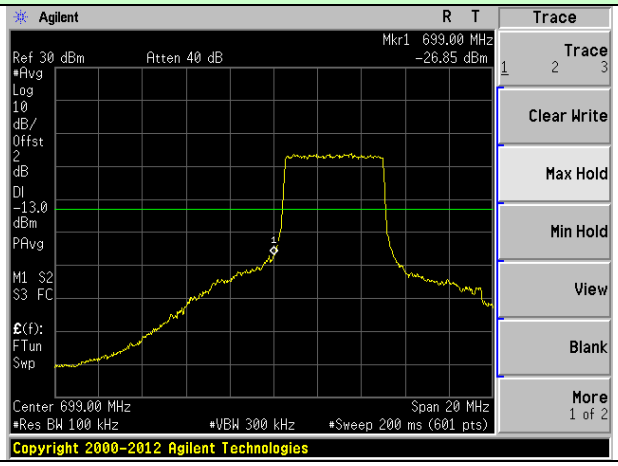
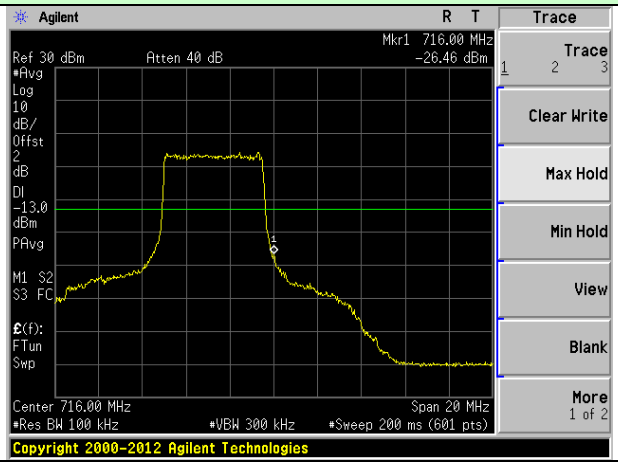
5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)

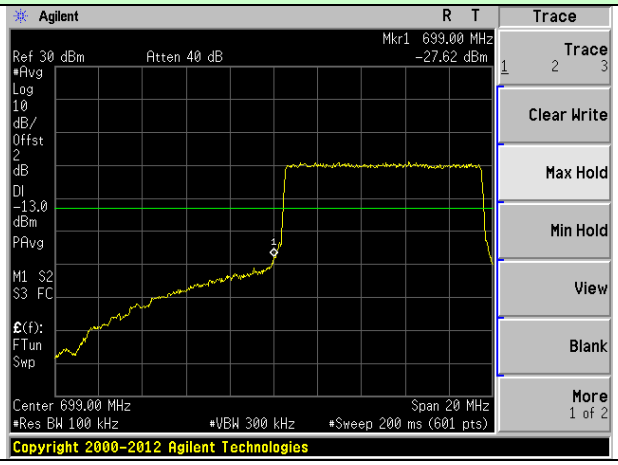




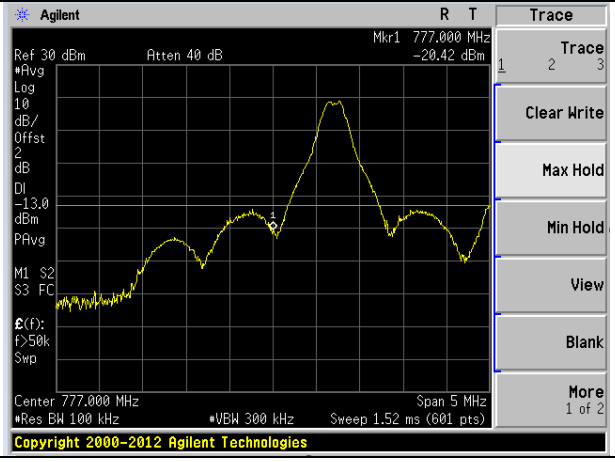
Lowest channel | Highest channel

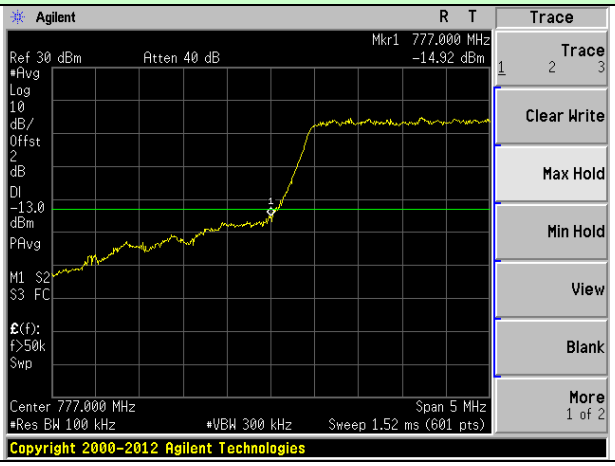
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Lowest channel	Highest channel

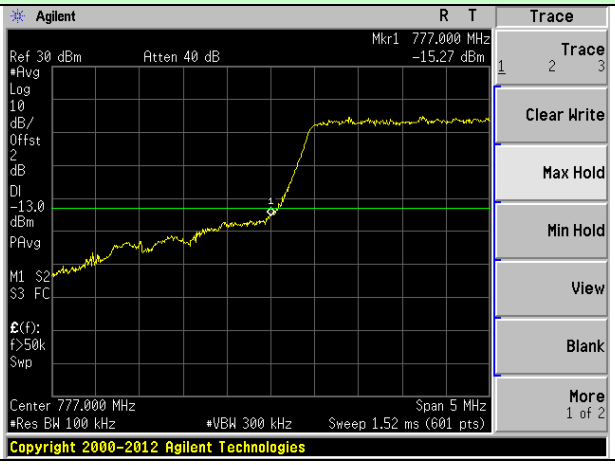
10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Lowest channel	Highest channel

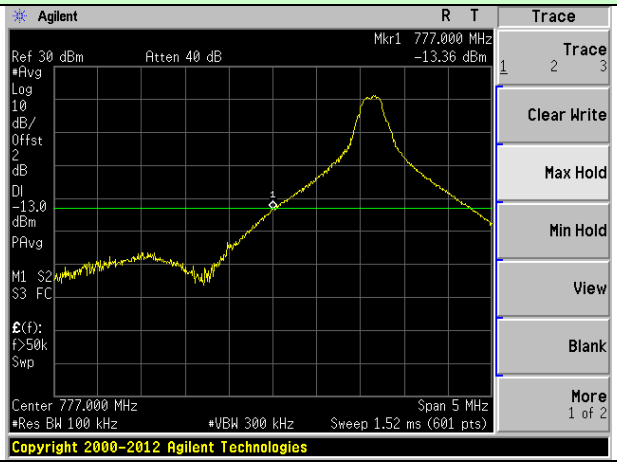
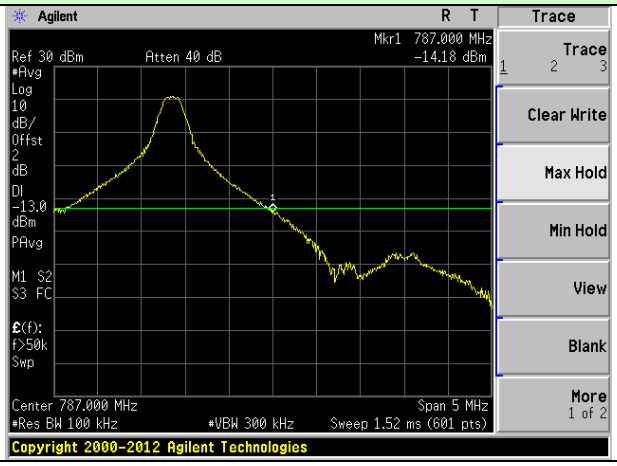
10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Lowest channel	Highest channel

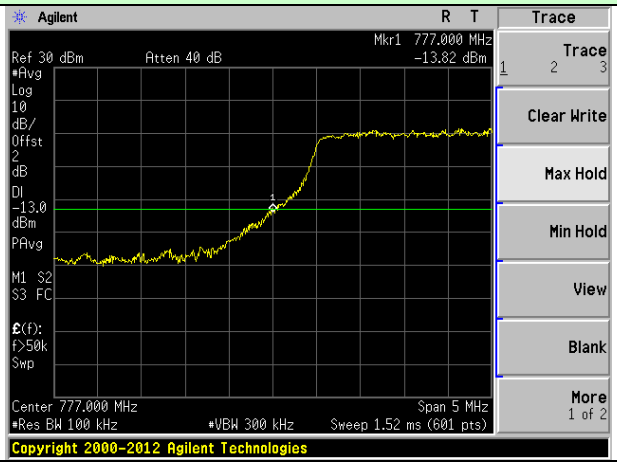
LTE Band 13 (16QAM mode):

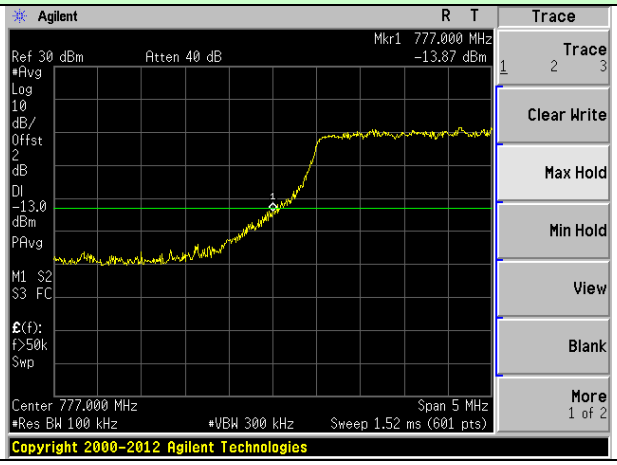
5MHz Bandwidth (RB size:1# RB offset:0#)	5MHz Bandwidth (RB size:1# RB offset:24#)
	
Lowest channel	Highest channel

5MHz Bandwidth (RB size:12# RB offset:0#)	5MHz Bandwidth (RB size:12# RB offset:13#)
	
Lowest channel	Highest channel

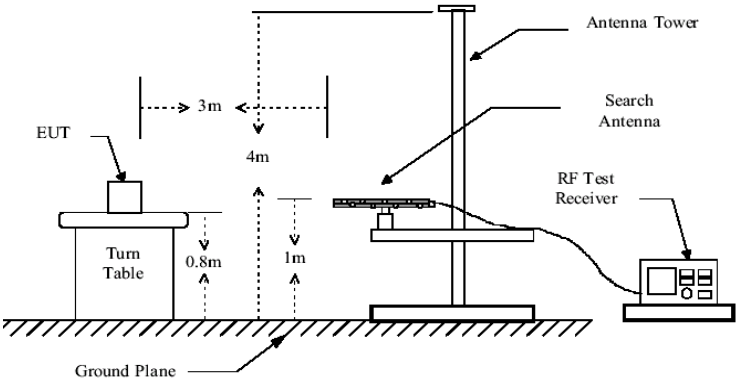
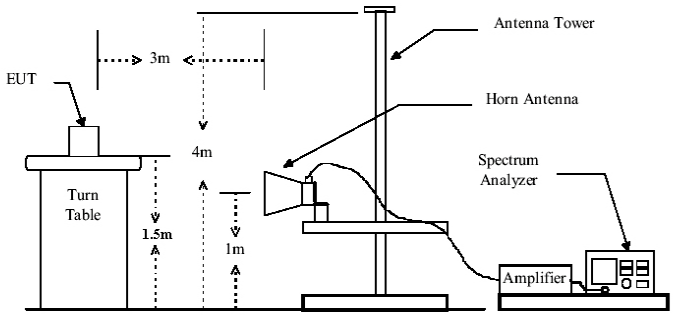
5MHz Bandwidth (RB size:25# RB offset:0#)	5MHz Bandwidth (RB size:25# RB offset:0#)
	
Lowest channel	Highest channel

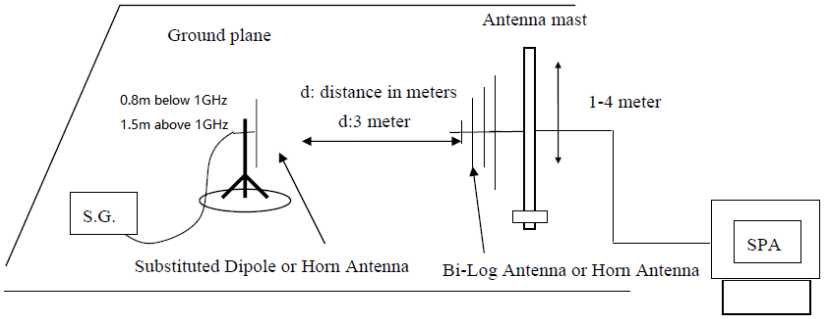
10MHz Bandwidth (RB size:1# RB offset:0#)	10MHz Bandwidth (RB size:1# RB offset:49#)
	
Middle channel	Middle channel

10MHz Bandwidth (RB size:25# RB offset:0#)	10MHz Bandwidth (RB size:25# RB offset:25#)
	
Middle channel	Middle channel

10MHz Bandwidth (RB size:50# RB offset:0#)	10MHz Bandwidth (RB size:50# RB offset:0#)
	
Middle channel	Middle channel

7.8 ERP, EIRP Measurement

Test Requirement:	Part 24.238 (a); Part 27.50(c)(10)/(d)(4)
Test Method:	FCC part2.1046
Limit:	LTE Band 2: 2W (EIRP) LTE Band 4: 1W (EIRP) LTE Band 5: 7W (ERP) LTE Band 12: 3W (ERP) LTE Band 13: 3W (ERP)
Test setup:	Below 1GHz  Above 1GHz  Substituted method:

	
Test Procedure:	1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. 2. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated. 3. ERP in frequency band 777–787MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated asfollows: ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB) 4. EIRP in frequency band 1710–1755MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows: EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data

The maximum value has been record:

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 2 (1.4M)	Lowest	QPSK	H	22.51	-1.93	1.13	21.71	33.00	Pass
	Middle	QPSK	H	22.57	-1.93	1.22	21.86	33.00	Pass
	Highest	QPSK	H	22.13	-1.93	1.34	21.54	33.00	Pass
	Lowest	16-QAM	H	22.58	-1.93	1.13	21.78	33.00	Pass
	Middle	16-QAM	H	22.35	-1.93	1.22	21.64	33.00	Pass
	Highest	16-QAM	H	22.12	-1.93	1.34	21.53	33.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 2 (3M)	Lowest	QPSK	H	22.33	-1.93	1.13	21.53	33.00	Pass
	Middle	QPSK	H	22.57	-1.93	1.22	21.86	33.00	Pass
	Highest	QPSK	H	22.52	-1.93	1.34	21.93	33.00	Pass
	Lowest	16-QAM	H	22.14	-1.93	1.13	21.34	33.00	Pass
	Middle	16-QAM	H	22.29	-1.93	1.22	21.58	33.00	Pass
	Highest	16-QAM	H	22.22	-1.93	1.34	21.63	33.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 2 (5M)	Lowest	QPSK	H	22.46	-1.93	1.13	21.66	33.00	Pass
	Middle	QPSK	H	22.6	-1.93	1.22	21.89	33.00	Pass
	Highest	QPSK	H	22.33	-1.93	1.34	21.74	33.00	Pass
	Lowest	16-QAM	H	22.48	-1.93	1.13	21.68	33.00	Pass
	Middle	16-QAM	H	22.28	-1.93	1.22	21.57	33.00	Pass
	Highest	16-QAM	H	22.33	-1.93	1.34	21.74	33.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 2 (10M)	Lowest	QPSK	H	22.57	-1.93	1.13	21.77	33.00	Pass
	Middle	QPSK	H	21.79	-1.93	1.22	21.08	33.00	Pass
	Highest	QPSK	H	21.95	-1.93	1.34	21.36	33.00	Pass
	Lowest	16-QAM	H	22.24	-1.93	1.13	21.44	33.00	Pass
	Middle	16-QAM	H	22.28	-1.93	1.22	21.57	33.00	Pass
	Highest	16-QAM	H	21.98	-1.93	1.34	21.39	33.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 2(15M)	Lowest	QPSK	H	22.17	-1.93	1.13	21.37	33.00	Pass
	Middle	QPSK	H	21.79	-1.93	1.22	21.08	33.00	Pass
	Highest	QPSK	H	22.46	-1.93	1.34	21.87	33.00	Pass
	Lowest	16-QAM	H	22.56	-1.93	1.13	21.76	33.00	Pass
	Middle	16-QAM	H	22.07	-1.93	1.22	21.36	33.00	Pass
	Highest	16-QAM	H	22.43	-1.93	1.34	21.84	33.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 2 (20M)	Lowest	QPSK	H	22.65	-1.93	1.13	21.85	33.00	Pass
	Middle	QPSK	H	22.37	-1.93	1.22	21.66	33.00	Pass
	Highest	QPSK	H	22.1	-1.93	1.34	21.51	33.00	Pass
	Lowest	16-QAM	H	22.53	-1.93	1.13	21.73	33.00	Pass
	Middle	16-QAM	H	22.31	-1.93	1.22	21.6	33.00	Pass
	Highest	16-QAM	H	22.03	-1.93	1.34	21.44	33.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 4 (1.4M)	Lowest	QPSK	H	22.58	-2.74	1.71	21.55	30.00	Pass
	Middle	QPSK	H	22.25	-2.74	1.73	21.24	30.00	Pass
	Highest	QPSK	H	22.29	-2.74	1.81	21.36	30.00	Pass
	Lowest	16-QAM	H	22.5	-2.74	1.71	21.47	30.00	Pass
	Middle	16-QAM	H	22.57	-2.74	1.73	21.56	30.00	Pass
	Highest	16-QAM	H	22.8	-2.74	1.81	21.87	30.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 4 (3M)	Lowest	QPSK	H	22.57	-2.74	1.71	21.54	30.00	Pass
	Middle	QPSK	H	22.57	-2.74	1.73	21.56	30.00	Pass
	Highest	QPSK	H	22.61	-2.74	1.81	21.68	30.00	Pass
	Lowest	16-QAM	H	22.26	-2.74	1.71	21.23	30.00	Pass
	Middle	16-QAM	H	22.42	-2.74	1.73	21.41	30.00	Pass
	Highest	16-QAM	H	22.3	-2.74	1.81	21.37	30.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 4 (5M)	Lowest	QPSK	H	22.56	-2.74	1.71	21.53	30.00	Pass
	Middle	QPSK	H	22.29	-2.74	1.73	21.28	30.00	Pass
	Highest	QPSK	H	22.6	-2.74	1.81	21.67	30.00	Pass
	Lowest	16-QAM	H	22.44	-2.74	1.71	21.41	30.00	Pass
	Middle	16-QAM	H	22.88	-2.74	1.73	21.87	30.00	Pass
	Highest	16-QAM	H	22.56	-2.74	1.81	21.63	30.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 4 (10M)	Lowest	QPSK	H	22.47	-2.74	1.71	21.44	30.00	Pass
	Middle	QPSK	H	22.54	-2.74	1.73	21.53	30.00	Pass
	Highest	QPSK	H	22.81	-2.74	1.81	21.88	30.00	Pass
	Lowest	16-QAM	H	22.06	-2.74	1.71	21.03	30.00	Pass
	Middle	16-QAM	H	22.29	-2.74	1.73	21.28	30.00	Pass
	Highest	16-QAM	H	22.54	-2.74	1.81	21.61	30.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 4 (15M)	Lowest	QPSK	H	22.8	-2.74	1.71	21.77	30.00	Pass
	Middle	QPSK	H	22.65	-2.74	1.73	21.64	30.00	Pass
	Highest	QPSK	H	22.45	-2.74	1.81	21.52	30.00	Pass
	Lowest	16-QAM	H	22.36	-2.74	1.71	21.33	30.00	Pass
	Middle	16-QAM	H	22.53	-2.74	1.73	21.52	30.00	Pass
	Highest	16-QAM	H	22.56	-2.74	1.81	21.63	30.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
LTE Band 4 (20M)	Lowest	QPSK	H	22.11	-2.74	1.71	21.08	30.00	Pass
	Middle	QPSK	H	22.61	-2.74	1.73	21.6	30.00	Pass
	Highest	QPSK	H	22.51	-2.74	1.81	21.58	30.00	Pass
	Lowest	16-QAM	H	22.69	-2.74	1.71	21.66	30.00	Pass
	Middle	16-QAM	H	22.88	-2.74	1.73	21.87	30.00	Pass
	Highest	16-QAM	H	22.68	-2.74	1.81	21.75	30.00	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 5 (1.4M)	Lowest	QPSK	H	22.08	-2.08	1.55	21.55	38.45	Pass
	Middle	QPSK	H	22.23	-2.08	1.6	21.75	38.45	Pass
	Highest	QPSK	H	22.16	-2.08	1.65	21.73	38.45	Pass
	Lowest	16-QAM	H	22.22	-2.08	1.55	21.69	38.45	Pass
	Middle	16-QAM	H	22.02	-2.08	1.6	21.54	38.45	Pass
	Highest	16-QAM	H	21.82	-2.08	1.65	21.39	38.45	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 5 (3M)	Lowest	QPSK	H	22.01	-2.08	1.55	21.48	38.45	Pass
	Middle	QPSK	H	21.84	-2.08	1.6	21.36	38.45	Pass
	Highest	QPSK	H	21.86	-2.08	1.65	21.43	38.45	Pass
	Lowest	16-QAM	H	22.1	-2.08	1.55	21.57	38.45	Pass
	Middle	16-QAM	H	21.85	-2.08	1.6	21.37	38.45	Pass
	Highest	16-QAM	H	22.06	-2.08	1.65	21.63	38.45	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 5 (5M)	Lowest	QPSK	H	22	-2.08	1.55	21.47	38.45	Pass
	Middle	QPSK	H	21.84	-2.08	1.6	21.36	38.45	Pass
	Highest	QPSK	H	22.28	-2.08	1.65	21.85	38.45	Pass
	Lowest	16-QAM	H	22.36	-2.08	1.55	21.83	38.45	Pass
	Middle	16-QAM	H	22	-2.08	1.6	21.52	38.45	Pass
	Highest	16-QAM	H	21.9	-2.08	1.65	21.47	38.45	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 5 (10M)	Lowest	QPSK	H	21.92	-2.08	1.55	21.39	38.45	Pass
	Middle	QPSK	H	21.75	-2.08	1.6	21.27	38.45	Pass
	Highest	QPSK	H	22.04	-2.08	1.65	21.61	38.45	Pass
	Lowest	16-QAM	H	22.45	-2.08	1.55	21.92	38.45	Pass
	Middle	16-QAM	H	21.81	-2.08	1.6	21.33	38.45	Pass
	Highest	16-QAM	H	21.51	-2.08	1.65	21.08	38.45	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 12 (1.4M)	Lowest	QPSK	H	24.36	-2.46	1.55	21.91	34.77	Pass
	Middle	QPSK	H	24.04	-2.46	1.6	21.64	34.77	Pass
	Highest	QPSK	H	23.95	-2.46	1.65	21.59	34.77	Pass
	Lowest	16-QAM	H	23.92	-2.46	1.55	21.47	34.77	Pass
	Middle	16-QAM	H	23.76	-2.46	1.6	21.36	34.77	Pass
	Highest	16-QAM	H	24.09	-2.46	1.65	21.73	34.77	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 12 (5M)	Lowest	QPSK	H	24.08	-2.46	1.55	21.63	34.77	Pass
	Middle	QPSK	H	23.87	-2.46	1.6	21.47	34.77	Pass
	Highest	QPSK	H	23.92	-2.46	1.65	21.56	34.77	Pass
	Lowest	16-QAM	H	23.78	-2.46	1.55	21.33	34.77	Pass
	Middle	16-QAM	H	24.25	-2.46	1.6	21.85	34.77	Pass
	Highest	16-QAM	H	23.95	-2.46	1.65	21.59	34.77	Pass

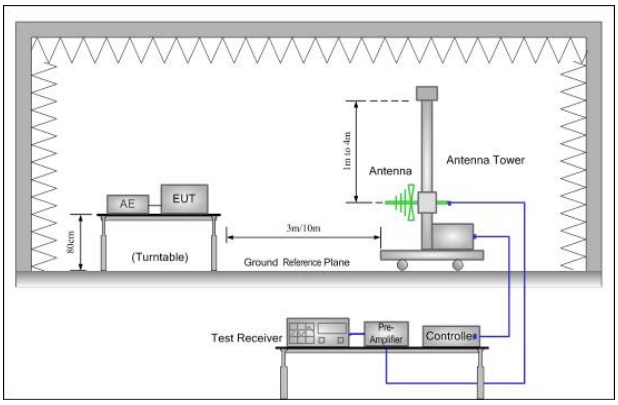
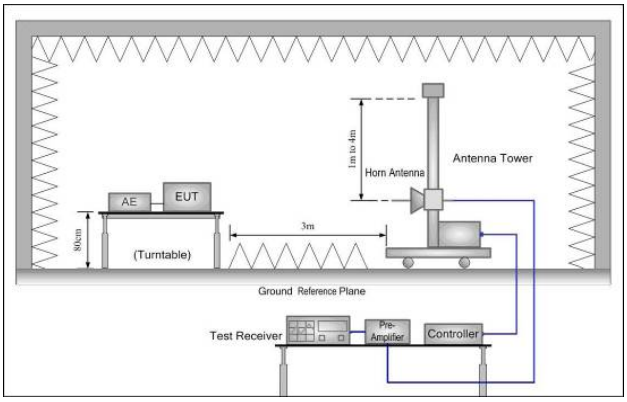
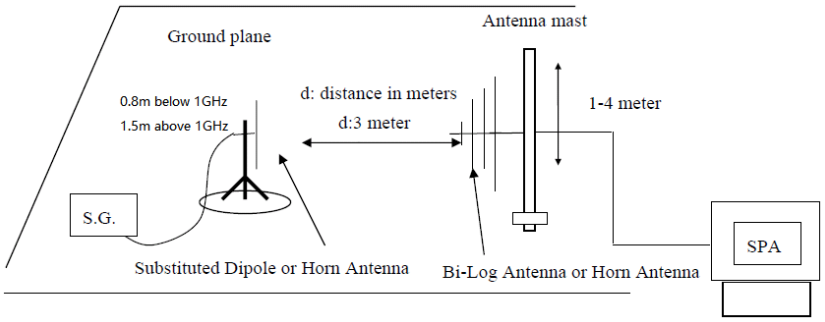
EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 12 (5M)	Lowest	QPSK	H	24.27	-2.46	1.64	21.82	34.77	Pass
	Middle	QPSK	H	23.76	-2.46	1.70	21.36	34.77	Pass
	Highest	QPSK	H	23.9	-2.46	1.75	21.54	34.77	Pass
	Lowest	16-QAM	H	23.89	-2.46	1.64	21.44	34.77	Pass
	Middle	16-QAM	H	23.79	-2.46	1.70	21.39	34.77	Pass
	Highest	16-QAM	H	23.44	-2.46	1.75	21.08	34.77	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 12 (10M)	Lowest	QPSK	H	23.94	-2.46	1.64	21.49	34.77	Pass
	Middle	QPSK	H	24.31	-2.46	1.70	21.91	34.77	Pass
	Highest	QPSK	H	24.19	-2.46	1.75	21.83	34.77	Pass
	Lowest	16-QAM	H	24.07	-2.46	1.64	21.62	34.77	Pass
	Middle	16-QAM	H	23.5	-2.46	1.70	21.1	34.77	Pass
	Highest	16-QAM	H	23.4	-2.46	1.75	21.04	34.77	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 13 (5M)	Lowest	QPSK	H	24.31	-3.88	1.43	21.86	34.77	Pass
	Middle	QPSK	H	24.14	-3.88	1.48	21.74	34.77	Pass
	Highest	QPSK	H	23.88	-3.88	1.52	21.52	34.77	Pass
	Lowest	16-QAM	H	23.48	-3.88	1.43	21.03	34.77	Pass
	Middle	16-QAM	H	24.13	-3.88	1.48	21.73	34.77	Pass
	Highest	16-QAM	H	24.22	-3.88	1.52	21.86	34.77	Pass

EUT mode	Channel	Modulation	Polarization	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 13 (10M)	Middle	QPSK	H	23.96	-3.88	1.48	21.56	34.77	Pass
	Middle	16-QAM	H	23.78	-3.88	1.48	21.38	34.77	Pass

7.9 Field strength of spurious radiation measurement

Test Requirement:	Part 24.238 (a); FCC Part 27.53(h)/(g)
Test Method:	FCC part2.1053
Limit:	Band 2/4/12:-13dBm
Test setup:	Below 1GHz  Above 1GHz  Substituted method: 

Test Procedure:	1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. 2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations. 3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method. 4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data
Remark：
1. The emission behaviour belongs to narrowband spurious emission.
2. Remark"---" means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

QPSK mode:

Test mode:	LTE Band 2(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3705.00	Vertical	-39.43	-13.00	Pass
5557.50	V	-42.01		
7410.00	V	-44.11		
9262.50	V	-46.22		
11115.00	V	---		
3705.00	Horizontal	-44.40	-13.00	Pass
5557.50	H	-48.06		
7410.00	H	-49.48		
9262.50	H	-51.99		
11115.00	H	---		
Test mode:	**LTE Band 2(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-40.55	-13.00	Pass
5640.00	V	-42.68		
7520.00	V	-44.42		
9400.00	V	-46.18		
11280.00	V	---		
3760.00	Horizontal	-44.67	-13.00	Pass
5640.00	H	-47.70		
7520.00	H	-48.87		
9400.00	H	-50.94		
11280.00	H	---		
Test mode:	**LTE Band 2(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3815.00	Vertical	-40.59	-13.00	Pass
5722.50	V	-42.48		
7630.00	V	-44.01		
9537.50	V	-45.58		
11445.00	V	---		
3815.00	Horizontal	-44.24	-13.00	Pass
5722.50	H	-46.93		
7630.00	H	-47.96		
9537.50	H	-49.79		
11445.00	H	---		

Test mode:	LTE Band 2(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3810.00	Vertical	-36.34	-13.00	Pass
5715.00	V	-38.75		
7620.00	V	-40.76		
9525.00	V	-42.66		
11430.00	V	---		
3810.00	Horizontal	-40.97	-13.00	Pass
5715.00	H	-44.39		
7620.00	H	-45.77		
9525.00	H	-48.18		
11430.00	H	---		
Test mode:	**LTE Band 2(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-34.30	-13.00	Pass
5640.00	V	-36.78		
7520.00	V	-38.84		
9400.00	V	-40.81		
11280.00	V	---		
3760.00	Horizontal	-39.07	-13.00	Pass
5640.00	H	-42.58		
7520.00	H	-44.01		
9400.00	H	-46.49		
11280.00	H	---		
Test mode:	**LTE Band 2(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3710.00	Vertical	-35.35	-13.00	Pass
5565.00	V	-37.76		
7420.00	V	-39.77		
9275.00	V	-41.67		
11130.00	V	---		
3710.00	Horizontal	-39.98	-13.00	Pass
5565.00	H	-43.40		
7420.00	H	-44.78		
9275.00	H	-47.19		
11130.00	H	---		

Test mode:	LTE Band 2(15MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3805.00	Vertical	-39.19	-13.00	Pass
5707.50	V	-42.26		
7610.00	V	-44.78		
9512.50	V	-44.23		
11415.00	V	---		
3805.00	Horizontal	-45.07	-13.00	Pass
5707.50	H	-45.41		
7610.00	H	-44.15		
9512.50	H	-43.19		
11415.00	H	---		
Test mode:	**LTE Band 2(15MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-39.77	-13.00	Pass
5640.00	V	-42.69		
7520.00	V	-45.08		
9400.00	V	-43.41		
11280.00	V	---		
3760.00	Horizontal	-45.36	-13.00	Pass
5640.00	H	-44.49		
7520.00	H	-41.14		
9400.00	H	-45.03		
11280.00	H	---		
Test mode:	**LTE Band 2(15MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3715.00	Vertical	-38.88	-13.00	Pass
5572.50	V	-41.61		
7430.00	V	-43.84		
9287.50	V	-46.02		
11145.00	V	---		
3715.00	Horizontal	-44.10	-13.00	Pass
5572.50	H	-46.96		
7430.00	H	-45.50		
9287.50	H	-45.20		
11145.00	H	---		

Test mode:	LTE Band 2(20MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3800.00	Vertical	-37.62	-13.00	Pass
5700.00	V	-41.36		
7600.00	V	-44.08		
9500.00	V	-41.61		
11400.00	V	---		
3800.00	Horizontal	-40.41	-13.00	Pass
5700.00	H	-43.09		
7600.00	H	-46.49		
9500.00	H	-45.10		
11400.00	H	---		
Test mode:	**LTE Band 2(20MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-39.55	-13.00	Pass
5640.00	V	-40.86		
7520.00	V	-44.47		
9400.00	V	-46.94		
11280.00	V	---		
3760.00	Horizontal	-42.00	-13.00	Pass
5640.00	H	-43.90		
7520.00	H	-41.58		
9400.00	H	-40.96		
11280.00	H	---		
Test mode:	**LTE Band 2(20MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3720.00	Vertical	-37.97	-13.00	Pass
5580.00	V	-40.41		
7440.00	V	-43.03		
9300.00	V	-45.93		
11160.00	V	---		
3720.00	Horizontal	-41.32	-13.00	Pass
5580.00	H	-43.74		
7440.00	H	-45.11		
9300.00	H	-41.29		
11160.00	H	---		

Test mode:	LTE Band 4(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3425.00	Vertical	-39.86	-13.00	Pass
5137.50	V	-40.57		
6850.00	V	-42.00		
8562.50	V	-44.23		
10275.00	V	---		
3425.00	Horizontal	-43.07	-13.00	Pass
5137.50	H	-44.73		
6850.00	H	-45.67		
8562.50	H	-43.60		
10275.00	H	---		
Test mode:	**LTE Band 4(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-40.49	-13.00	Pass
5197.50	V	-42.62		
6930.00	V	-44.21		
8662.50	V	-48.30		
10395.00	V	---		
3465.00	Horizontal	-43.70	-13.00	Pass
5197.50	H	-44.57		
6930.00	H	-42.82		
8662.50	H	-43.90		
10395.00	H	---		
Test mode:	**LTE Band 4(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3505.00	Vertical	-38.21	-13.00	Pass
5257.50	V	-39.65		
7010.00	V	-41.73		
8762.50	V	-42.80		
10515.00	V	---		
3505.00	Horizontal	-44.04	-13.00	Pass
5257.50	H	-44.89		
7010.00	H	-43.00		
8762.50	H	-43.01		
10515.00	H	---		

Test mode:	LTE Band 4(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3430.00	Vertical	-38.19	-13.00	Pass
5145.00	V	-40.83		
6860.00	V	-42.98		
8575.00	V	-45.11		
10290.00	V	---		
3430.00	Horizontal	-43.26	-13.00	Pass
5145.00	H	-46.99		
6860.00	H	-48.46		
8575.00	H	-51.05		
10290.00	H	---		
Test mode:	**LTE Band 4(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-39.31	-13.00	Pass
5197.50	V	-41.50		
6930.00	V	-43.29		
8662.50	V	-45.07		
10395.00	V	---		
3465.00	Horizontal	-43.53	-13.00	Pass
5197.50	H	-46.63		
6930.00	H	-47.85		
8662.50	H	-50.00		
10395.00	H	---		
Test mode:	**LTE Band 4(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3500.00	Vertical	-39.35	-13.00	Pass
5250.00	V	-41.30		
7000.00	V	-42.88		
8750.00	V	-44.47		
10500.00	V	---		
3500.00	Horizontal	-43.10	-13.00	Pass
5250.00	H	-45.86		
7000.00	H	-46.94		
8750.00	H	-48.85		
10500.00	H	---		

Test mode:	LTE Band 4(15MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3435.00	Vertical	-36.57	-13.00	Pass
5152.50	V	-38.97		
6870.00	V	-40.97		
8587.50	V	-42.87		
10305.00	V	---		
3435.00	Horizontal	-41.18	-13.00	Pass
5152.50	H	-44.59		
6870.00	H	-45.96		
8587.50	H	-48.35		
10305.00	H	---		
Test mode:	**LTE Band 4(15MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-34.53	-13.00	Pass
5197.50	V	-37.00		
6930.00	V	-39.05		
8662.50	V	-41.02		
10395.00	V	---		
3465.00	Horizontal	-39.28	-13.00	Pass
5197.50	H	-42.78		
6930.00	H	-44.20		
8662.50	H	-46.66		
10395.00	H	---		
Test mode:	**LTE Band 4(15MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3495.00	Vertical	-35.58	-13.00	Pass
5242.50	V	-37.98		
6990.00	V	-39.98		
8737.50	V	-41.88		
10485.00	V	---		
3495.00	Horizontal	-40.19	-13.00	Pass
5242.50	H	-43.60		
6990.00	H	-44.97		
8737.50	H	-47.36		
10485.00	H	---		

Test mode:	LTE Band 4(20MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3440.00	Vertical	-39.29	-13.00	Pass
5160.00	V	-42.35		
6880.00	V	-44.88		
8600.00	V	-47.32		
10320.00	V	---		
3440.00	Horizontal	-45.17	-13.00	Pass
5160.00	H	-49.49		
6880.00	H	-51.23		
8600.00	H	-54.27		
10320.00	H	---		
Test mode:	**LTE Band 4(20MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-39.87	-13.00	Pass
5197.50	V	-42.78		
6930.00	V	-45.18		
8662.50	V	-47.50		
10395.00	V	---		
3465.00	Horizontal	-45.46	-13.00	Pass
5197.50	H	-49.57		
6930.00	H	-51.22		
8662.50	H	-54.11		
10395.00	H	---		
Test mode:	**LTE Band 4(20MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3490.00	Vertical	-38.98	-13.00	Pass
5235.00	V	-41.70		
6980.00	V	-43.94		
8725.00	V	-46.11		
10470.00	V	---		
3490.00	Horizontal	-44.20	-13.00	Pass
5235.00	H	-48.04		
6980.00	H	-49.58		
8725.00	H	-52.28		
10470.00	H	---		

Test mode:	LTE Band 5(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1653.00	Vertical	-36.90	-13.00	Pass
2479.50	V	-40.67		
3306.00	V	-43.43		
4132.50	V	-40.96		
4959.00	V	-41.25		
1653.00	Horizontal	-39.74	-13.00	Pass
2479.50	H	-42.46		
3306.00	H	-47.90		
4132.50	H	-51.55		
4959.00	H	-48.56		
Test mode:	**LTE Band 5(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.00	Vertical	-38.83	-13.00	Pass
2509.50	V	-40.17		
3346.00	V	-43.82		
4182.50	V	-46.29		
5019.00	V	-45.66		
1673.00	Horizontal	-41.33	-13.00	Pass
2509.50	H	-43.27		
3346.00	H	-47.99		
4182.50	H	-50.41		
5019.00	H	-45.78		
Test mode:	**LTE Band 5(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1693.00	Vertical	-37.25	-13.00	Pass
2539.50	V	-39.72		
3386.00	V	-42.38		
4232.50	V	-45.28		
5079.00	V	-46.23		
1693.00	Horizontal	-40.65	-13.00	Pass
2539.50	H	-43.11		
3386.00	H	-44.52		
4232.50	H	-50.74		
5079.00	H	-47.85		

Test mode:	LTE Band 5(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1658.00	Vertical	-39.25	-13.00	Pass
2487.00	V	-39.98		
3316.00	V	-41.44		
4145.00	V	-43.69		
4974.00	V	-46.08		
1658.00	Horizontal	-42.50	-13.00	Pass
2487.00	H	-44.20		
3316.00	H	-45.17		
4145.00	H	-48.14		
4974.00	H	-47.71		
Test mode:	**LTE Band 5(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.00	Vertical	-39.88	-13.00	Pass
2509.50	V	-42.03		
3346.00	V	-43.65		
4182.50	V	-47.76		
5019.00	V	-41.58		
1673.00	Horizontal	-43.13	-13.00	Pass
2509.50	H	-44.04		
3346.00	H	-46.32		
4182.50	H	-49.44		
5019.00	H	-46.08		
Test mode:	**LTE Band 5(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1688.00	Vertical	-37.60	-13.00	Pass
2532.00	V	-39.06		
3376.00	V	-41.17		
4220.00	V	-42.26		
5064.00	V	-43.38		
1688.00	Horizontal	-43.47	-13.00	Pass
2532.00	H	-47.36		
3376.00	H	-46.50		
4220.00	H	-42.55		
5064.00	H	-47.81		

Test mode:	LTE Band 12(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1559.00	Vertical	-36.46	-13.00	Pass
2338.50	V	-39.18		
3118.00	V	-41.42		
3897.50	V	-43.57		
4677.00	V	-46.32		
1559.00	Horizontal	-41.67	-13.00	Pass
2338.50	H	-45.50		
3118.00	H	-47.05		
3897.50	H	-49.75		
4677.00	H	-46.82		
Test mode:	**LTE Band 12(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1764.00	Vertical	-37.58	-13.00	Pass
2646.00	V	-39.85		
3528.00	V	-41.73		
4410.00	V	-43.53		
5292.00	V	-41.59		
1764.00	Horizontal	-41.94	-13.00	Pass
2646.00	H	-45.14		
3528.00	H	-46.44		
4410.00	H	-48.70		
5292.00	H	-46.82		
Test mode:	**LTE Band 12(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1569.00	Vertical	-37.62	-13.00	Pass
2353.50	V	-39.65		
3138.00	V	-41.32		
3922.50	V	-42.93		
4707.00	V	-43.29		
1569.00	Horizontal	-41.51	-13.00	Pass
2353.50	H	-44.37		
3138.00	H	-45.53		
3922.50	H	-47.55		
4707.00	H	-48.33		

Test mode:	LTE Band 12(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1408.00	Vertical	-36.97	-13.00	Pass
2112.00	V	-39.35		
2816.00	V	-41.33		
3520.00	V	-43.23		
4224.00	V	-46.28		
1408.00	Horizontal	-41.55	-13.00	Pass
2112.00	H	-44.93		
2816.00	H	-46.28		
3520.00	H	-48.66		
4224.00	H	-47.08		
Test mode:	**LTE Band 12(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1415.00	Vertical	-34.93	-13.00	Pass
2122.50	V	-37.38		
2830.00	V	-39.41		
3537.50	V	-41.38		
4245.00	V	-43.31		
1415.00	Horizontal	-39.65	-13.00	Pass
2122.50	H	-43.12		
2830.00	H	-44.52		
3537.50	H	-46.97		
4245.00	H	-45.08		
Test mode:	**LTE Band 12(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1422.00	Vertical	-35.98	-13.00	Pass
2133.00	V	-38.36		
2844.00	V	-40.34		
3555.00	V	-42.24		
4266.00	V	-43.28		
1422.00	Horizontal	-40.56	-13.00	Pass
2133.00	H	-43.94		
2844.00	H	-45.29		
3555.00	H	-47.67		
4266.00	H	-45.07		

Test mode:	LTE Band 13(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1559.00	Vertical	-38.50	-13.00	Pass
2338.50	V	-41.13		
3118.00	V	-43.27		
3897.50	V	-45.39		
4677.00	V	---		
1559.00	Horizontal	-43.55	-13.00	Pass
2338.50	H	-47.26		
3118.00	H	-48.72		
3897.50	H	-51.29		
4677.00	H	---		
Test mode:	**LTE Band 13(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1564.00	Vertical	-39.62	-13.00	Pass
2346.00	V	-41.80		
3128.00	V	-43.58		
3910.00	V	-45.35		
4692.00	V	---		
1564.00	Horizontal	-43.82	-13.00	Pass
2346.00	H	-46.90		
3128.00	H	-48.11		
3910.00	H	-50.24		
4692.00	H	---		
Test mode:	**LTE Band 13(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1569.00	Vertical	-39.66	-13.00	Pass
2353.50	V	-41.60		
3138.00	V	-43.17		
3922.50	V	-44.75		
4707.00	V	---		
1569.00	Horizontal	-43.39	-13.00	Pass
2353.50	H	-46.13		
3138.00	H	-47.20		
3922.50	H	-49.09		
4707.00	H	---		

Test mode:	LTE Band 13(10MHz)		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1564.00	Vertical	-36.84	-13.00	Pass
2346.00	V	-39.23		
3128.00	V	-41.21		
3910.00	V	-43.11		
4692.00	V	---		
1564.00	Horizontal	-41.43	-13.00	Pass
2346.00	H	-44.82		
3128.00	H	-46.18		
3910.00	H	-48.56		
4692.00	H	---		

16QAM mode:

Test mode:	LTE Band 2(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3705.00	Vertical	-39.37	-13.00	Pass
5557.50	V	-42.42		
7410.00	V	-44.94		
9262.50	V	-47.39		
11115.00	V	---		
3705.00	Horizontal	-45.24	-13.00	Pass
5557.50	H	-49.56		
7410.00	H	-51.29		
9262.50	H	-54.33		
11115.00	H	---		
Test mode:	**LTE Band 2(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-39.95	-13.00	Pass
5640.00	V	-42.85		
7520.00	V	-45.24		
9400.00	V	-47.57		
11280.00	V	---		
3760.00	Horizontal	-45.53	-13.00	Pass
5640.00	H	-49.64		
7520.00	H	-51.28		
9400.00	H	-54.17		
11280.00	H	---		
Test mode:	**LTE Band 2(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3815.00	Vertical	-39.06	-13.00	Pass
5722.50	V	-41.77		
7630.00	V	-44.00		
9537.50	V	-46.18		
11445.00	V	---		
3815.00	Horizontal	-44.27	-13.00	Pass
5722.50	H	-48.11		
7630.00	H	-49.64		
9537.50	H	-52.34		
11445.00	H	---		

Test mode:	LTE Band 2(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3810.00	Vertical	-37.24	-13.00	Pass
5715.00	V	-40.99		
7620.00	V	-43.73		
9525.00	V	-41.26		
11430.00	V	---		
3810.00	Horizontal	-40.05	-13.00	Pass
5715.00	H	-42.75		
7620.00	H	-48.17		
9525.00	H	-51.81		
11430.00	H	---		
Test mode:	**LTE Band 2(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-39.17	-13.00	Pass
5640.00	V	-40.49		
7520.00	V	-44.12		
9400.00	V	-46.59		
11280.00	V	---		
3760.00	Horizontal	-41.64	-13.00	Pass
5640.00	H	-43.56		
7520.00	H	-48.26		
9400.00	H	-50.67		
11280.00	H	---		
Test mode:	**LTE Band 2(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3710.00	Vertical	-37.59	-13.00	Pass
5565.00	V	-40.04		
7420.00	V	-42.68		
9275.00	V	-45.58		
11130.00	V	---		
3710.00	Horizontal	-40.96	-13.00	Pass
5565.00	H	-43.40		
7420.00	H	-44.79		
9275.00	H	-51.00		
11130.00	H	---		

Test mode:	LTE Band 2(15MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3805.00	Vertical	-39.60	-13.00	Pass
5707.50	V	-40.32		
7610.00	V	-41.76		
9512.50	V	-44.01		
11415.00	V	---		
3805.00	Horizontal	-42.83	-13.00	Pass
5707.50	H	-44.51		
7610.00	H	-45.46		
9512.50	H	-48.41		
11415.00	H	---		
Test mode:	**LTE Band 2(15MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-40.23	-13.00	Pass
5640.00	V	-42.37		
7520.00	V	-43.97		
9400.00	V	-48.08		
11280.00	V	---		
3760.00	Horizontal	-43.46	-13.00	Pass
5640.00	H	-44.35		
7520.00	H	-46.61		
9400.00	H	-49.71		
11280.00	H	---		
Test mode:	**LTE Band 2(15MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3715.00	Vertical	-37.95	-13.00	Pass
5572.50	V	-39.40		
7430.00	V	-41.49		
9287.50	V	-42.58		
11145.00	V	---		
3715.00	Horizontal	-43.80	-13.00	Pass
5572.50	H	-47.67		
7430.00	H	-49.79		
9287.50	H	-52.82		
11145.00	H	---		

Test mode:	LTE Band 2(20MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3800.00	Vertical	-36.34	-13.00	Pass
5700.00	V	-39.07		
7600.00	V	-41.31		
9500.00	V	-43.46		
11400.00	V	---		
3800.00	Horizontal	-41.56	-13.00	Pass
5700.00	H	-45.40		
7600.00	H	-46.95		
9500.00	H	-49.66		
11400.00	H	---		
Test mode:	**LTE Band 2(20MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-37.46	-13.00	Pass
5640.00	V	-39.74		
7520.00	V	-41.62		
9400.00	V	-43.42		
11280.00	V	---		
3760.00	Horizontal	-41.83	-13.00	Pass
5640.00	H	-45.04		
7520.00	H	-46.34		
9400.00	H	-48.61		
11280.00	H	---		
Test mode:	**LTE Band 2(20MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3720.00	Vertical	-37.50	-13.00	Pass
5580.00	V	-39.54		
7440.00	V	-41.21		
9300.00	V	-42.82		
11160.00	V	---		
3720.00	Horizontal	-41.40	-13.00	Pass
5580.00	H	-44.27		
7440.00	H	-45.43		
9300.00	H	-47.46		
11160.00	H	---		

Test mode:	LTE Band 4(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3425.00	Vertical	-36.55	-13.00	Pass
5137.50	V	-38.96		
6850.00	V	-40.95		
8562.50	V	-42.85		
10275.00	V	---		
3425.00	Horizontal	-41.17	-13.00	Pass
5137.50	H	-44.57		
6850.00	H	-45.94		
8562.50	H	-48.34		
10275.00	H	---		
Test mode:	**LTE Band 4(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-34.51	-13.00	Pass
5197.50	V	-36.99		
6930.00	V	-39.03		
8662.50	V	-41.00		
10395.00	V	---		
3465.00	Horizontal	-39.27	-13.00	Pass
5197.50	H	-42.76		
6930.00	H	-44.18		
8662.50	H	-46.65		
10395.00	H	---		
Test mode:	**LTE Band 4(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3505.00	Vertical	-35.56	-13.00	Pass
5257.50	V	-37.97		
7010.00	V	-39.96		
8762.50	V	-41.86		
10515.00	V	---		
3505.00	Horizontal	-40.18	-13.00	Pass
5257.50	H	-43.58		
7010.00	H	-44.95		
8762.50	H	-47.35		
10515.00	H	---		

Test mode:	LTE Band 4(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3430.00	Vertical	-38.80	-13.00	Pass
5145.00	V	-41.89		
6860.00	V	-44.43		
8575.00	V	-46.88		
10290.00	V	---		
3430.00	Horizontal	-44.72	-13.00	Pass
5145.00	H	-49.07		
6860.00	H	-50.83		
8575.00	H	-53.90		
10290.00	H	---		
Test mode:	**LTE Band 4(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-39.38	-13.00	Pass
5197.50	V	-42.32		
6930.00	V	-44.73		
8662.50	V	-47.06		
10395.00	V	---		
3465.00	Horizontal	-45.01	-13.00	Pass
5197.50	H	-49.15		
6930.00	H	-50.82		
8662.50	H	-53.74		
10395.00	H	---		
Test mode:	**LTE Band 4(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3500.00	Vertical	-38.49	-13.00	Pass
5250.00	V	-41.24		
7000.00	V	-43.49		
8750.00	V	-45.67		
10500.00	V	---		
3500.00	Horizontal	-43.75	-13.00	Pass
5250.00	H	-47.62		
7000.00	H	-49.18		
8750.00	H	-51.91		
10500.00	H	---		

Test mode:	LTE Band 4(15MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3435.00	Vertical	-37.00	-13.00	Pass
5152.50	V	-40.77		
6870.00	V	-43.52		
8587.50	V	-41.05		
10305.00	V	---		
3435.00	Horizontal	-39.84	-13.00	Pass
5152.50	H	-42.55		
6870.00	H	-47.98		
8587.50	H	-51.63		
10305.00	H	---		
Test mode:	**LTE Band 4(15MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-38.93	-13.00	Pass
5197.50	V	-40.27		
6930.00	V	-43.91		
8662.50	V	-46.38		
10395.00	V	---		
3465.00	Horizontal	-41.43	-13.00	Pass
5197.50	H	-43.36		
6930.00	H	-48.07		
8662.50	H	-50.49		
10395.00	H	---		
Test mode:	**LTE Band 4(15MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3495.00	Vertical	-37.35	-13.00	Pass
5242.50	V	-39.82		
6990.00	V	-42.47		
8737.50	V	-45.37		
10485.00	V	---		
3495.00	Horizontal	-40.75	-13.00	Pass
5242.50	H	-43.20		
6990.00	H	-44.60		
8737.50	H	-50.82		
10485.00	H	---		

Test mode:	LTE Band 4(20MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3440.00	Vertical	-39.54	-13.00	Pass
5160.00	V	-40.27		
6880.00	V	-41.71		
8600.00	V	-43.95		
10320.00	V	---		
3440.00	Horizontal	-42.78	-13.00	Pass
5160.00	H	-44.46		
6880.00	H	-45.41		
8600.00	H	-48.36		
10320.00	H	---		
Test mode:	**LTE Band 4(20MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.00	Vertical	-40.17	-13.00	Pass
5197.50	V	-42.32		
6930.00	V	-43.92		
8662.50	V	-48.02		
10395.00	V	---		
3465.00	Horizontal	-43.41	-13.00	Pass
5197.50	H	-44.30		
6930.00	H	-46.56		
8662.50	H	-49.66		
10395.00	H	---		
Test mode:	**LTE Band 4(20MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3490.00	Vertical	-37.89	-13.00	Pass
5235.00	V	-39.35		
6980.00	V	-41.44		
8725.00	V	-42.52		
10470.00	V	---		
3490.00	Horizontal	-43.75	-13.00	Pass
5235.00	H	-47.62		
6980.00	H	-49.74		
8725.00	H	-52.77		
10470.00	H	---		

Test mode:	LTE Band 5(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1653.00	Vertical	-36.16	-13.00	Pass
2479.50	V	-38.89		
3306.00	V	-41.14		
4132.50	V	-43.30		
4959.00	V	-45.87		
1653.00	Horizontal	-41.38	-13.00	Pass
2479.50	H	-45.24		
3306.00	H	-46.80		
4132.50	H	-49.52		
4959.00	H	-47.14		
Test mode:	**LTE Band 5(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.00	Vertical	-37.28	-13.00	Pass
2509.50	V	-39.56		
3346.00	V	-41.45		
4182.50	V	-43.26		
5019.00	V	--45.71		
1673.00	Horizontal	-41.65	-13.00	Pass
2509.50	H	-44.88		
3346.00	H	-46.19		
4182.50	H	-48.47		
5019.00	H	--46.80		
Test mode:	**LTE Band 5(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1693.00	Vertical	-37.32	-13.00	Pass
2539.50	V	-39.36		
3386.00	V	-41.04		
4232.50	V	-42.66		
5079.00	V	--43.21		
1693.00	Horizontal	-41.22	-13.00	Pass
2539.50	H	-44.11		
3386.00	H	-45.28		
4232.50	H	-47.32		
5079.00	H	-44.01		

Test mode:	LTE Band 5(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1658.00	Vertical	-36.37	-13.00	Pass
2487.00	V	-38.78		
3316.00	V	-40.78		
4145.00	V	-42.69		
4974.00	V	--45.07		
1658.00	Horizontal	-40.99	-13.00	Pass
2487.00	H	-44.41		
3316.00	H	-45.79		
4145.00	H	-48.20		
4974.00	H	-46.01		
Test mode:	**LTE Band 5(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.00	Vertical	-34.33	-13.00	Pass
2509.50	V	-36.81		
3346.00	V	-38.86		
4182.50	V	-40.84		
5019.00	V	-42.07		
1673.00	Horizontal	-39.09	-13.00	Pass
2509.50	H	-42.60		
3346.00	H	-44.03		
4182.50	H	-46.51		
5019.00	H	-44.21		
Test mode:	**LTE Band 5(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1688.00	Vertical	-35.38	-13.00	Pass
2532.00	V	-37.79		
3376.00	V	-39.79		
4220.00	V	-41.70		
5064.00	V	-43.21		
1688.00	Horizontal	-40.00	-13.00	Pass
2532.00	H	-43.42		
3376.00	H	-44.80		
4220.00	H	-47.21		
5064.00	H	-45.71		

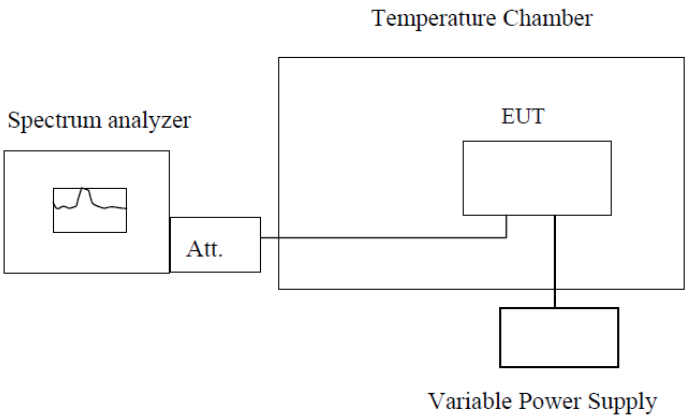
Test mode:	LTE Band 12(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1559.00	Vertical	-38.62	-13.00	Pass
2338.50	V	-41.71		
3118.00	V	-44.26		
3897.50	V	-46.72		
4677.00	V	-47.52		
1559.00	Horizontal	-44.54	-13.00	Pass
2338.50	H	-48.91		
3118.00	H	-50.68		
3897.50	H	-53.76		
4677.00	H	-49.01		
Test mode:	**LTE Band 12(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1764.00	Vertical	-39.20	-13.00	Pass
2646.00	V	-42.14		
3528.00	V	-44.56		
4410.00	V	-46.90		
5292.00	V	-47.21		
1764.00	Horizontal	-44.83	-13.00	Pass
2646.00	H	-48.99		
3528.00	H	-48.67		
4410.00	H	-49.60		
5292.00	H	-48.00		
Test mode:	**LTE Band 12(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1569.00	Vertical	-38.31	-13.00	Pass
2353.50	V	-41.06		
3138.00	V	-43.32		
3922.50	V	-45.51		
4707.00	V	-47.21		
1569.00	Horizontal	-43.57	-13.00	Pass
2353.50	H	-47.46		
3138.00	H	-49.03		
3922.50	H	-51.77		
4707.00	H	-49.08		

Test mode:	LTE Band 12(10MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1408.00	Vertical	-36.82	-13.00	Pass
2112.00	V	-40.59		
2816.00	V	-43.35		
3520.00	V	-40.89		
4224.00	V	-45.11		
1408.00	Horizontal	-39.66	-13.00	Pass
2112.00	H	-42.39		
2816.00	H	-47.83		
3520.00	H	-51.49		
4224.00	H	-47.36		
Test mode:	**LTE Band 12(10MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1415.00	Vertical	-38.75	-13.00	Pass
2122.50	V	-40.09		
2830.00	V	-43.74		
3537.50	V	-46.22		
4245.00	V	-48.21		
1415.00	Horizontal	-41.25	-13.00	Pass
2122.50	H	-43.20		
2830.00	H	-47.92		
3537.50	H	-50.35		
4245.00	H	-48.01		
Test mode:	**LTE Band 12(10MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1422.00	Vertical	-37.17	-13.00	Pass
2133.00	V	-39.64		
2844.00	V	-42.30		
3555.00	V	-45.21		
4266.00	V	-47.44		
1422.00	Horizontal	-40.57	-13.00	Pass
2133.00	H	-43.04		
2844.00	H	-44.45		
3555.00	H	-50.68		
4266.00	H	-50.30		

Test mode:	LTE Band 13(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1559.00	Vertical	-35.10	-13.00	Pass
2338.50	V	-37.88		
3118.00	V	-40.18		
3897.50	V	-42.36		
4677.00	V	---		
1559.00	Horizontal	-40.41	-13.00	Pass
2338.50	H	-44.33		
3118.00	H	-45.94		
3897.50	H	-48.72		
4677.00	H	---		
Test mode:	**LTE Band 13(5MHz)**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1564.00	Vertical	-36.22	-13.00	Pass
2346.00	V	-38.55		
3128.00	V	-40.49		
3910.00	V	-42.32		
4692.00	V	---		
1564.00	Horizontal	-40.68	-13.00	Pass
2346.00	H	-43.97		
3128.00	H	-45.33		
3910.00	H	-47.67		
4692.00	H	---		
Test mode:	**LTE Band 13(5MHz)**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1569.00	Vertical	-36.26	-13.00	Pass
2353.50	V	-38.35		
3138.00	V	-40.08		
3922.50	V	-41.72		
4707.00	V	---		
1569.00	Horizontal	-40.25	-13.00	Pass
2353.50	H	-43.20		
3138.00	H	-44.42		
3922.50	H	-46.52		
4707.00	H	---		

Test mode:	LTE Band 13(10MHz)		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1564.00	Vertical	-34.24	-13.00	Pass
2346.00	V	-36.74		
3128.00	V	-38.85		
3910.00	V	-40.79		
4692.00	V	---		
1564.00	Horizontal	-39.03	-13.00	Pass
2346.00	H	-42.57		
3128.00	H	-44.05		
3910.00	H	-46.59		
4692.00	H	---		

7.10 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC Part2.1055(a)(1)(b)
Test Method:	FCC Part2.1055(a)(1)(b)
Limit:	2.5ppm
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to –20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data

QPSK mode:

Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
12.0	-30	31	0.0167	2.5	Pass
	-20	35	0.0188		
	-10	30	0.0160		
	0	25	0.0132		
	10	29	0.0153		
	20	25	0.0132		
	30	41	0.0217		
	40	37	0.0195		
	50	35	0.0188		

Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
12.0	-30	26	0.0151	2.5	Pass
	-20	29	0.0166		
	-10	25	0.0143		
	0	22	0.0128		
	10	23	0.0135		
	20	21	0.0120		
	30	35	0.0204		
	40	30	0.0174		
	50	29	0.0166		

Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
12.0	-30	55	0.0217	2.5	Pass
	-20	63	0.0250		
	-10	53	0.0210		
	0	47	0.0183		
	10	52	0.0205		
	20	45	0.0179		
	30	76	0.0298		
	40	66	0.0261		
	50	63	0.0247		

Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
12.0	-30	59	0.0234	2.5	Pass
	-20	68	0.0270		
	-10	57	0.0227		
	0	50	0.0198		
	10	56	0.0221		
	20	49	0.0193		
	30	82	0.0322		
	40	71	0.0281		
	50	68	0.0267		

Reference Frequency: LTE Band 13 Middle channel=23230 channel=782MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
12.0	-30	28	0.0149	2.5	Pass
	-20	32	0.0168		
	-10	27	0.0142		
	0	22	0.0116		
	10	25	0.0135		
	20	22	0.0116		
	30	37	0.0194		
	40	33	0.0175		
	50	32	0.0168		

16QAM mode:

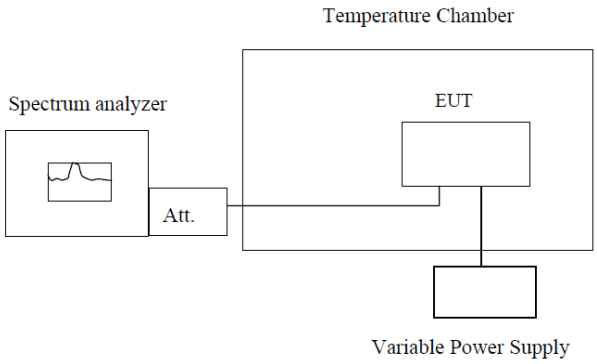
Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
12.0	-30	52	0.0278	2.5	Pass
	-20	59	0.0315		
	-10	50	0.0266		
	0	41	0.0216		
	10	48	0.0253		
	20	41	0.0216		
	30	69	0.0365		
	40	62	0.0328		
	50	59	0.0315		
Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
12.0	-30	43	0.0248	2.5	Pass
	-20	48	0.0275		
	-10	41	0.0234		
	0	36	0.0208		
	10	38	0.0221		
	20	34	0.0194		
	30	59	0.0342		
	40	50	0.0288		
	50	48	0.0275		

Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
12.0	-30	101	0.0399	2.5	Pass
	-20	117	0.0462		
	-10	98	0.0386		
	0	85	0.0336		
	10	95	0.0376		
	20	83	0.0328		
	30	140	0.0554		
	40	122	0.0482		
	50	116	0.0456		

Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
12.0	-30	92	0.0362	2.5	Pass
	-20	106	0.0418		
	-10	89	0.0350		
	0	77	0.0304		
	10	86	0.0341		
	20	75	0.0297		
	30	127	0.0502		
	40	111	0.0437		
	50	105	0.0413		

Reference Frequency: LTE Band 13 Middle channel=23230 channel=782MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
12.0	-30	23	0.0133	2.5	Pass
	-20	25	0.0147		
	-10	22	0.0126		
	0	19	0.0112		
	10	21	0.0119		
	20	18	0.0104		
	30	32	0.0183		
	40	27	0.0154		
	50	25	0.0147		

7.11 Frequency stability V.S. Voltage measurement

Test Requirement:	FCC Part2.1055(d)(1)(2)
Test Method:	FCC Part2.1055(d)(1)(2)
Limit:	2.5ppm
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 6.1 for details
Test results:	Pass

Measurement Data

QPSK mode:

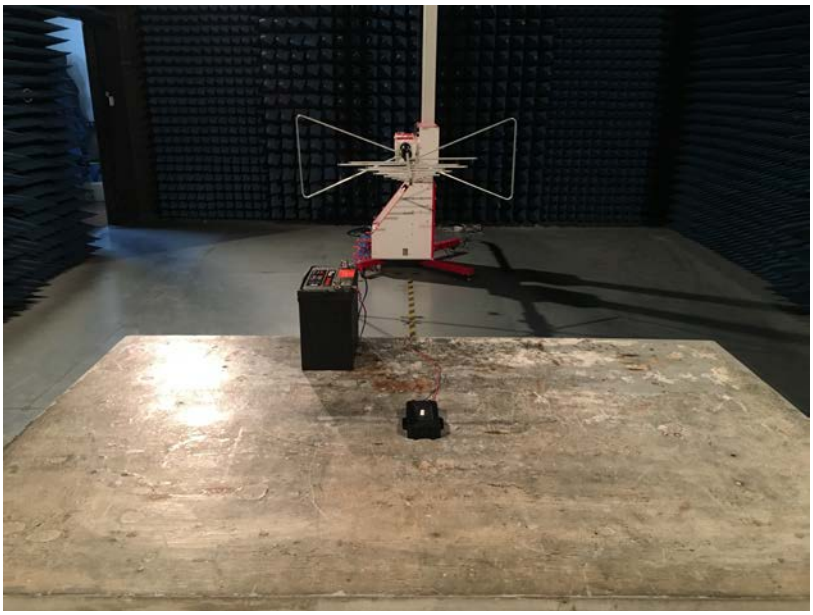
Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	27	0.0144	2.5	Pass
	12.0	31	0.0166		
	9.0	36	0.0189		
Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	46	0.0267	2.5	Pass
	12.0	33	0.0193		
	9.0	38	0.0218		
Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	56	0.0220	2.5	Pass
	12.0	64	0.0252		
	9.0	72	0.0282		
Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	48	0.0684	2.5	Pass
	12.0	59	0.0835		
	9.0	59	0.0835		
Reference Frequency: LTE Band 13 Middle channel=23230 channel=782MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	64	0.0340	2.5	Pass
	12.0	55	0.0291		
	9.0	60	0.0319		

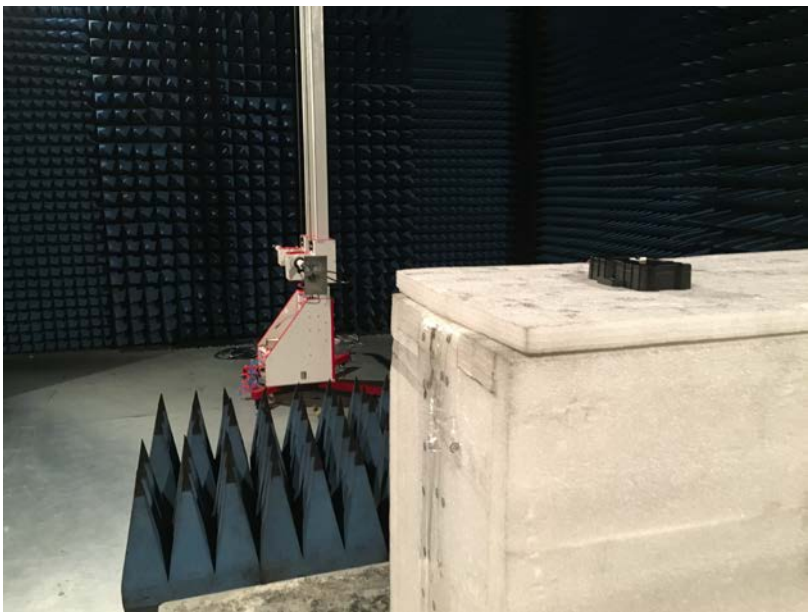
16QAM mode:

Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	52	0.0731	2.5	Pass
	12.0	39	0.0547		
	9.0	41	0.0584		
Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	108	0.0573	2.5	Pass
	12.0	124	0.0658		
	9.0	124	0.0661		
Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	102	0.0542	2.5	Pass
	12.0	87	0.0462		
	9.0	95	0.0508		
Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	57	0.0681	2.5	Pass
	12.0	72	0.0860		
	9.0	42	0.0502		
Reference Frequency: LTE Band 13 Middle channel=23230 channel=782MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	36.0	67	0.0359	2.5	Pass
	12.0	77	0.0411		
	9.0	78	0.0413		

8 Test Setup Photo

Radiated Emission





9 EUT Constructional Details

Reference to the test report No. : GTS201806000109F01

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