

LTE Cat M Appendix-Bandwidth

LTE Band 2					
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
1.4 MHz	QPSK	OBW	1.0890	1.0827	1.0883
		26dB bandwidth	1.226	1.236	1.254
	16QAM	OBW	0.91916	0.91270	0.91579
		26dB bandwidth	1.068	1.097	1.120
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
3.0 MHz	QPSK	OBW	1.0847	1.0828	1.0876
		26dB bandwidth	1.224	1.223	1.230
	16QAM	OBW	0.90887	0.91586	0.91635
		26dB bandwidth	1.104	1.097	1.099
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
5.0 MHz	QPSK	OBW	1.0831	1.0888	1.0838
		26dB bandwidth	1.243	1.344	1.306
	16QAM	OBW	0.91225	0.91381	0.91564
		26dB bandwidth	1.143	1.077	1.102
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
10.0 MHz	QPSK	OBW	1.0875	1.0910	1.0911
		26dB bandwidth	1.258	1.263	1.297
	16QAM	OBW	0.91884	0.91559	0.92511
		26dB bandwidth	1.333	1.374	1.423
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
15.0 MHz	QPSK	OBW	1.0911	1.0971	1.1077
		26dB bandwidth	1.348	1.878	2.015
	16QAM	OBW	0.94215	0.94071	1.0634
		26dB bandwidth	1.762	1.807	1.764
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
20.0 MHz	QPSK	OBW	1.0906	1.0976	1.0994
		26dB bandwidth	1.562	1.574	1.930
	16QAM	OBW	0.93576	0.95821	1.0697
		26dB bandwidth	1.687	1.879	1.973

LTE Band 2, Nominal Bandwidth: 1.4MHz, OBW & 26dB Bandwidth

QPSK Low channel



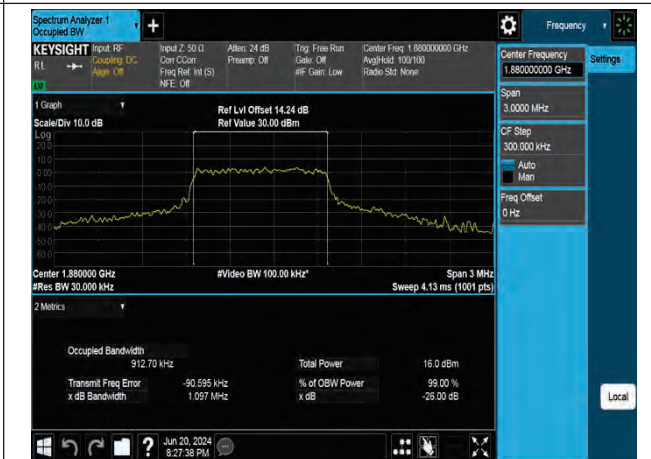
16QAM Low channel



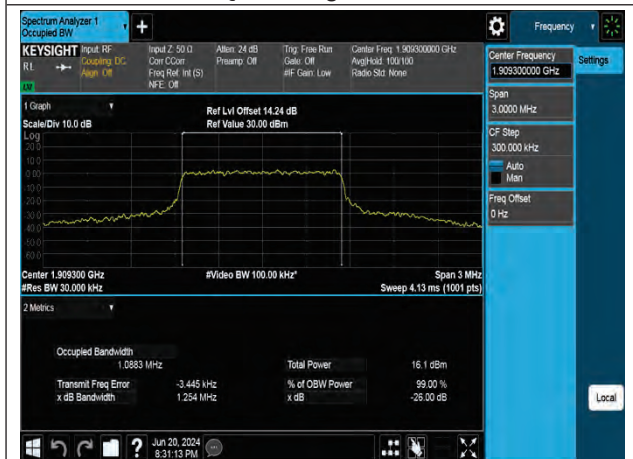
QPSK Middle channel



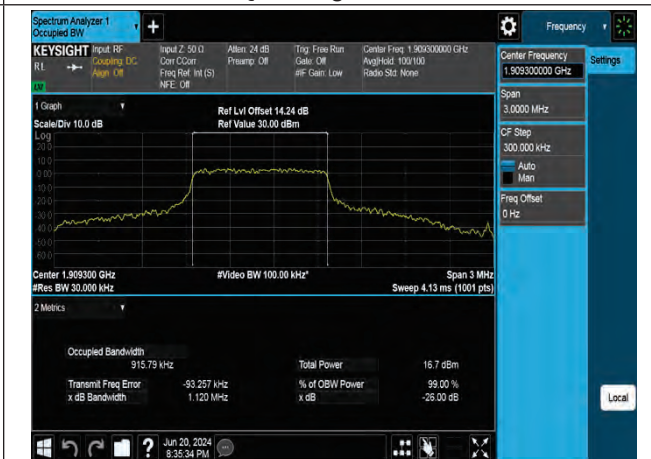
16QAM Middle channel



QPSK High channel



16QAM High channel

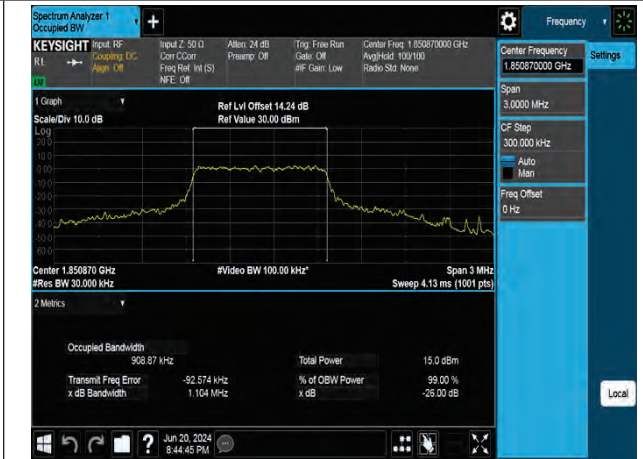


LTE Band 2, Nominal Bandwidth: 3.0MHz, OBW & 26dB Bandwidth

QPSK Low channel



16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel

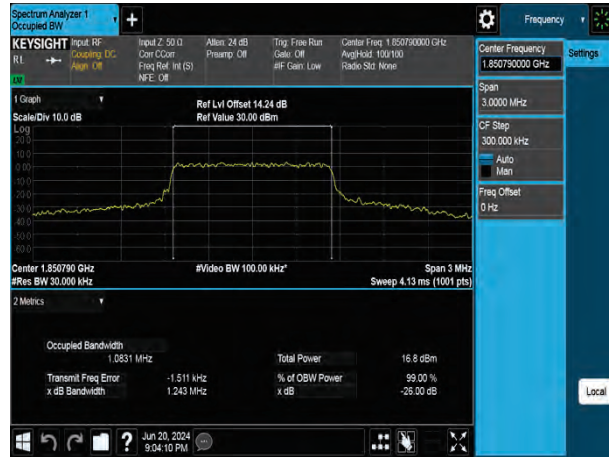


16QAM High channel

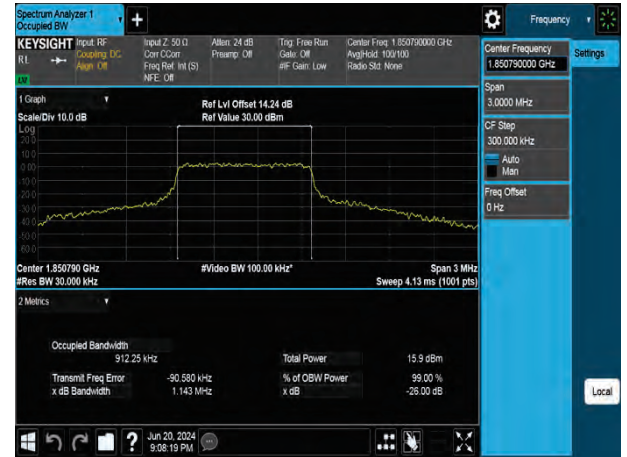


LTE Band 2, Nominal Bandwidth: 5MHz, OBW & 26dB Bandwidth

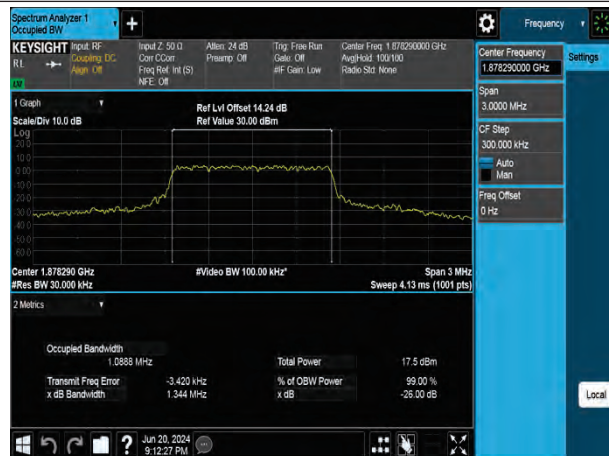
QPSK Low channel



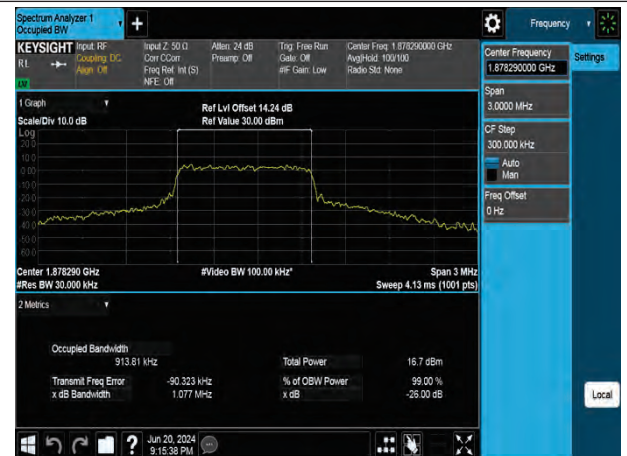
16QAM Low channel



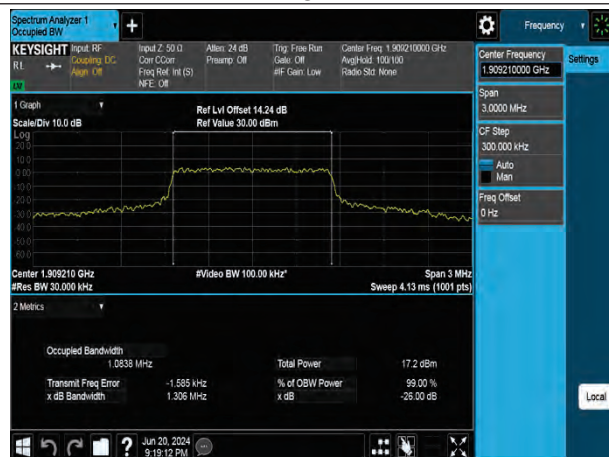
QPSK Middle channel



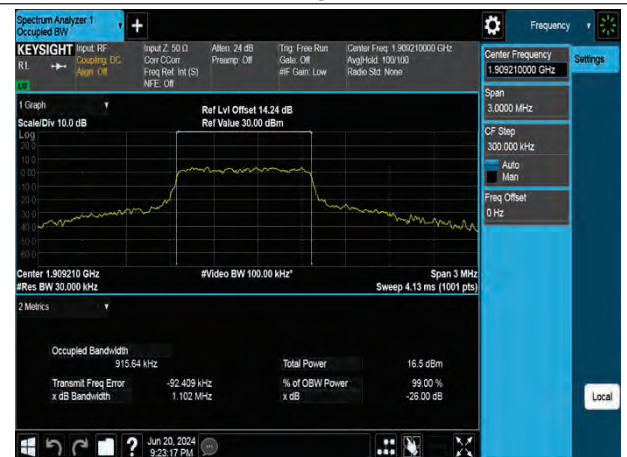
16QAM Middle channel



QPSK High channel

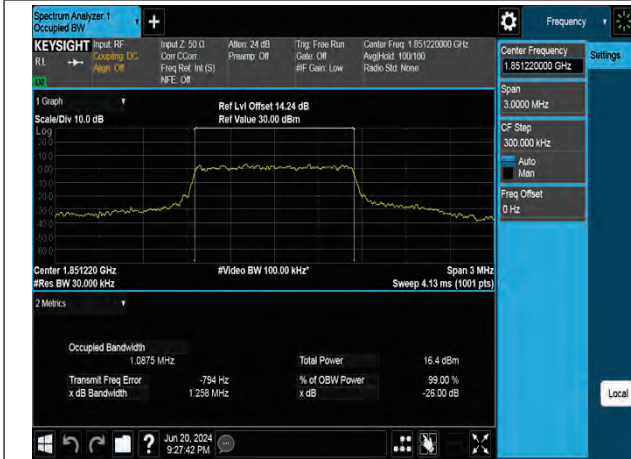


16QAM High channel



LTE Band 2, Nominal Bandwidth: 10MHz, OBW & 26dB Bandwidth

QPSK Low channel



16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel



16QAM High channel



LTE Band 2, Nominal Bandwidth: 15MHz, OBW & 26dB Bandwidth

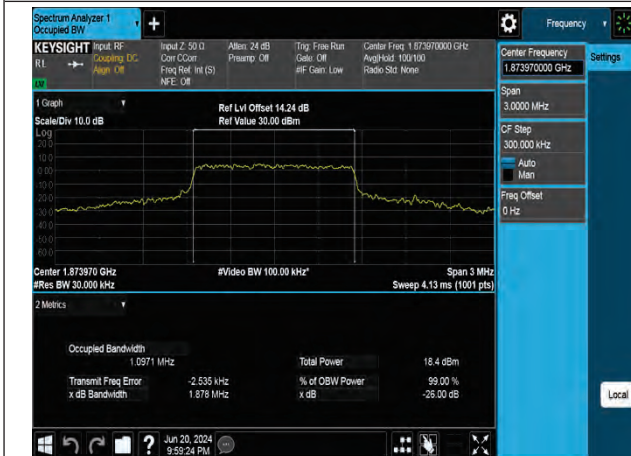
QPSK Low channel



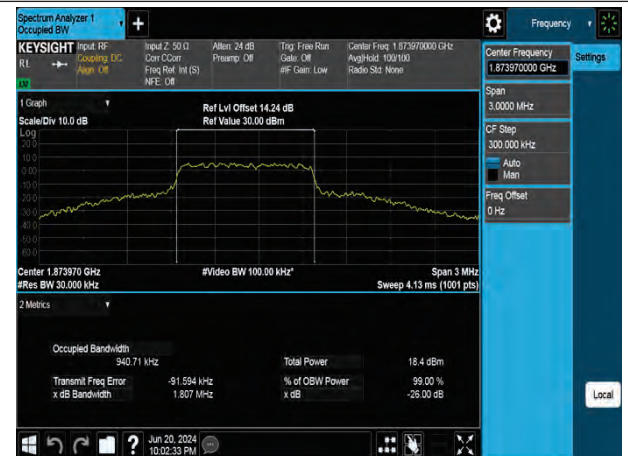
16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel

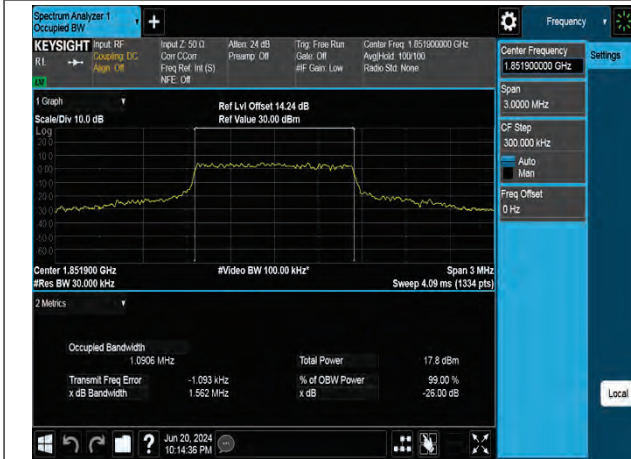


16QAM High channel



LTE Band 2, Nominal Bandwidth: 20MHz, OBW & 26dB Bandwidth

QPSK Low channel



16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel



16QAM High channel



LTE Band 4					
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
1.4 MHz	QPSK	OBW	1.0853	1.0856	1.0872
		26dB bandwidth	1.239	1.220	1.225
	16QAM	OBW	0.91271	0.90650	0.90977
		26dB bandwidth	1.026	1.051	1.098
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
3.0 MHz	QPSK	OBW	1.0838	1.0851	1.0863
		26dB bandwidth	1.226	1.262	1.225
	16QAM	OBW	0.90959	0.91237	0.90621
		26dB bandwidth	1.083	1.068	1.050
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
5.0 MHz	QPSK	OBW	1.0841	1.0871	1.0796
		26dB bandwidth	1.244	1.257	1.210
	16QAM	OBW	0.91126	0.90831	0.90913
		26dB bandwidth	1.078	1.103	1.072
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
10.0 MHz	QPSK	OBW	1.0815	1.0876	1.0784
		26dB bandwidth	1.237	1.275	1.278
	16QAM	OBW	0.91040	0.90863	0.90931
		26dB bandwidth	1.045	1.092	1.081
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
15.0 MHz	QPSK	OBW	1.0845	1.0919	1.0886
		26dB bandwidth	1.248	1.254	1.270
	16QAM	OBW	0.91710	0.91499	0.90979
		26dB bandwidth	1.097	1.099	1.109
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
20.0 MHz	QPSK	OBW	1.0779	1.0854	1.0833
		26dB bandwidth	1.241	1.239	1.251
	16QAM	OBW	0.91154	0.91316	0.91539
		26dB bandwidth	1.100	1.062	1.122

LTE Band 4, Nominal Bandwidth: 1.4MHz, OBW & 26dB Bandwidth

QPSK Low channel



16QAM Low channel



QPSK Middle channel



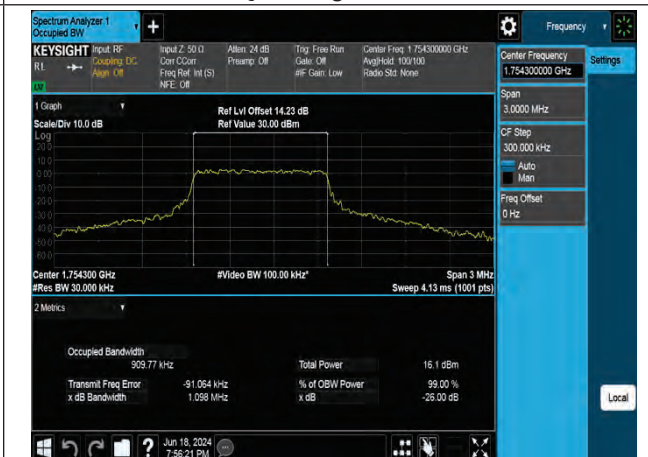
16QAM Middle channel



QPSK High channel



16QAM High channel

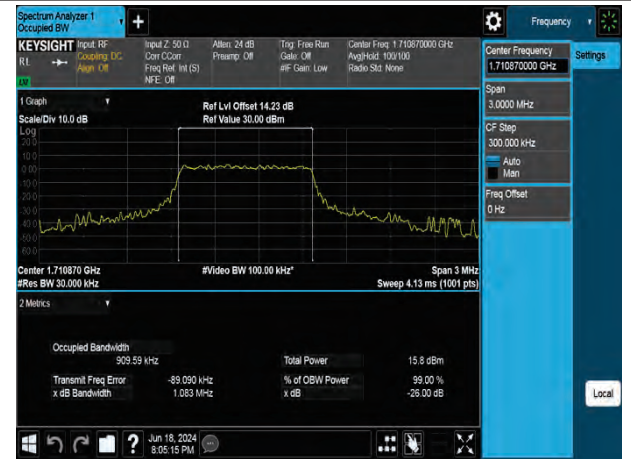


LTE Band 4, Nominal Bandwidth: 3.0MHz, OBW & 26dB Bandwidth

QPSK Low channel



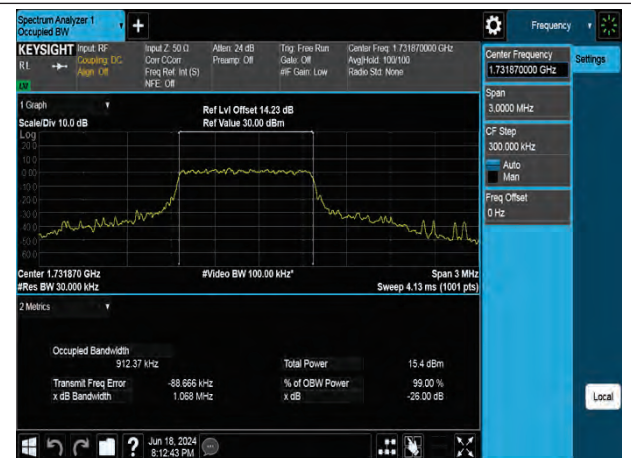
16QAM Low channel



QPSK Middle channel



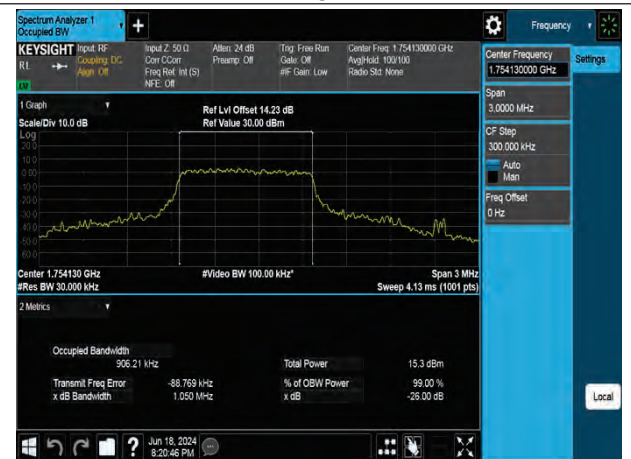
16QAM Middle channel



QPSK High channel



16QAM High channel

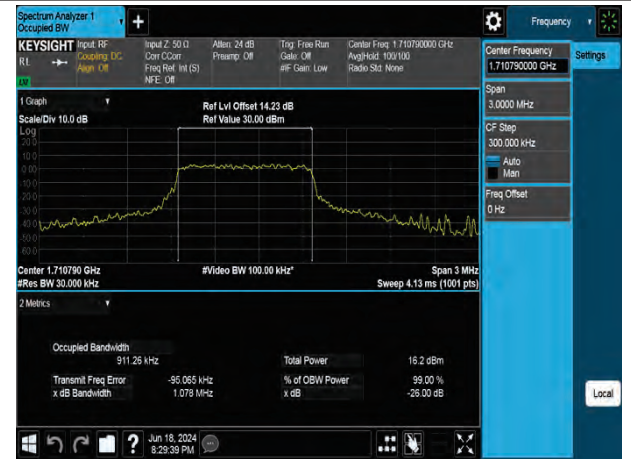


LTE Band 4, Nominal Bandwidth: 5MHz, OBW & 26dB Bandwidth

QPSK Low channel



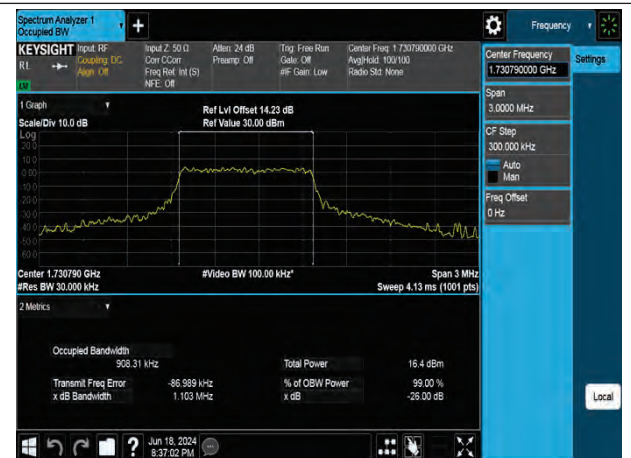
16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel

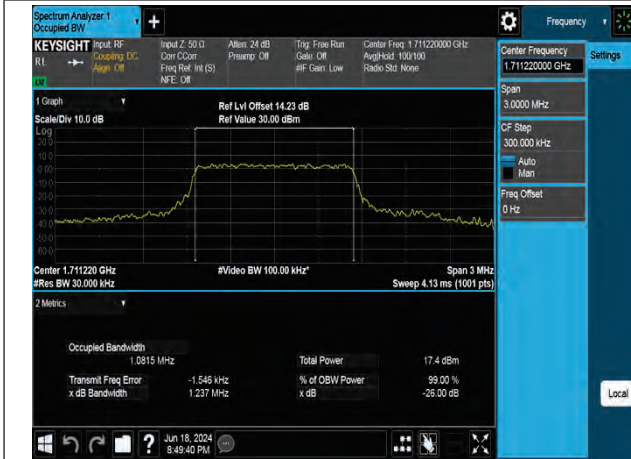


16QAM High channel

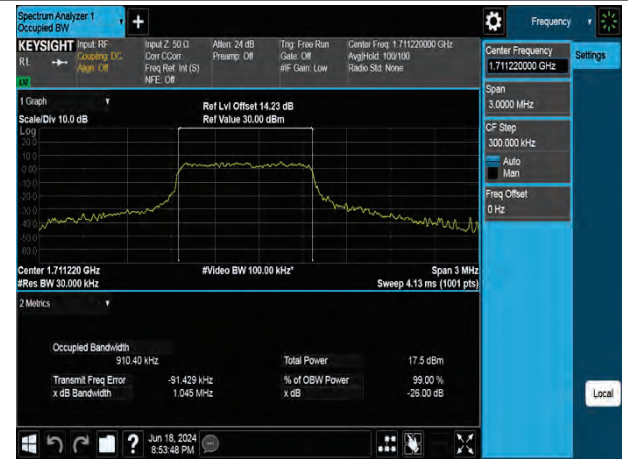


LTE Band 4, Nominal Bandwidth: 10MHz, OBW & 26dB Bandwidth

QPSK Low channel



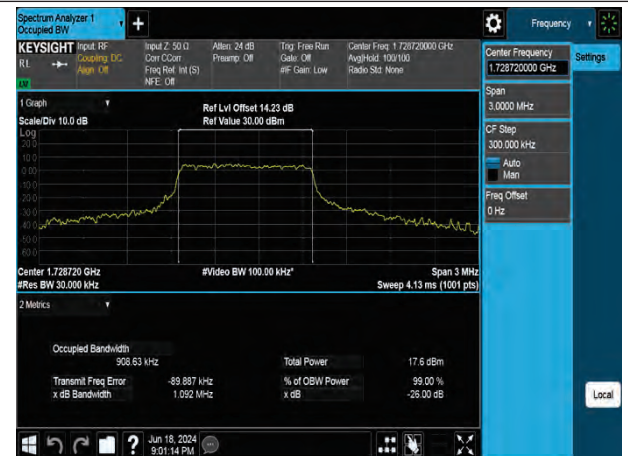
16QAM Low channel



QPSK Middle channel



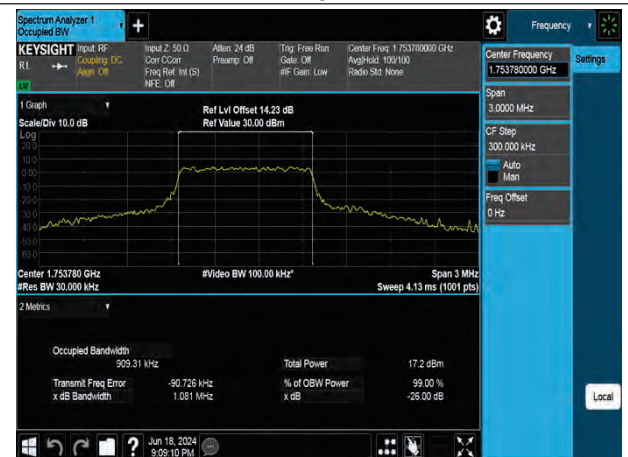
16QAM Middle channel



QPSK High channel



16QAM High channel



LTE Band 4, Nominal Bandwidth: 15MHz, OBW & 26dB Bandwidth

QPSK Low channel



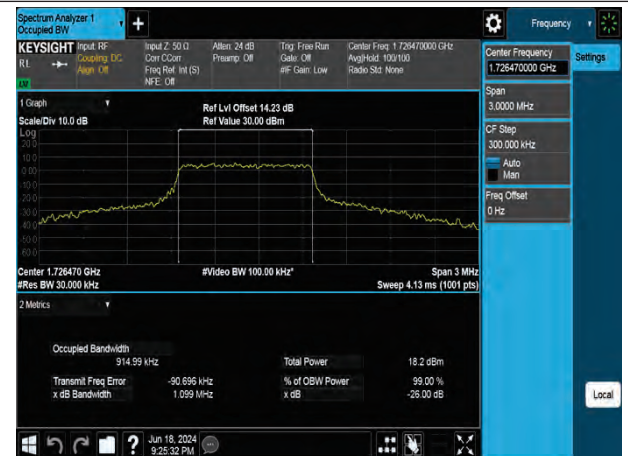
16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel



16QAM High channel



LTE Band 4, Nominal Bandwidth: 20MHz, OBW & 26dB Bandwidth

QPSK Low channel



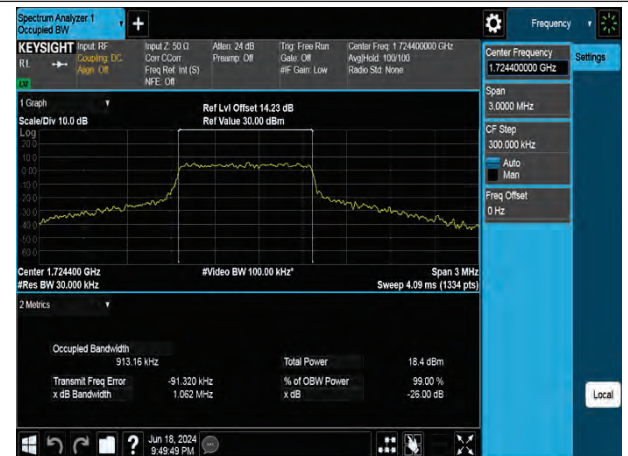
16QAM Low channel



QPSK Middle channel



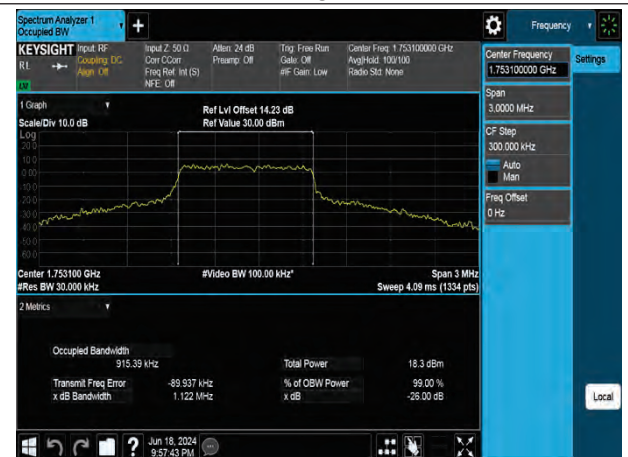
16QAM Middle channel



QPSK High channel



16QAM High channel



LTE Band 5					
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
1.4 MHz	QPSK	OBW	1.0818	1.0861	1.0886
		26dB bandwidth	1.224	1.208	1.256
	16QAM	OBW	0.91189	0.91293	0.90991
		26dB bandwidth	1.049	1.080	1.051
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
3.0 MHz	QPSK	OBW	1.0849	1.0845	1.0808
		26dB bandwidth	1.241	1.185	1.226
	16QAM	OBW	0.90804	0.91004	0.91104
		26dB bandwidth	1.075	1.047	1.055
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
5.0 MHz	QPSK	OBW	1.0806	1.0872	1.0818
		26dB bandwidth	1.220	1.231	1.1210
	16QAM	OBW	0.90999	0.91222	0.91185
		26dB bandwidth	1.097	1.086	1.056
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
10.0 MHz	QPSK	OBW	1.0809	1.0874	1.0760
		26dB bandwidth	1.223	1.251	1.260
	16QAM	OBW	0.90279	0.91083	0.90766
		26dB bandwidth	1.054	1.090	1.060

LTE Band 5, Nominal Bandwidth: 1.4MHz, OBW & 26dB Bandwidth

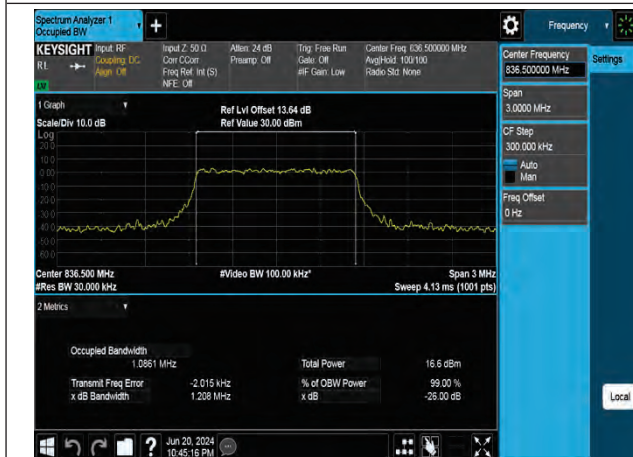
QPSK Low channel



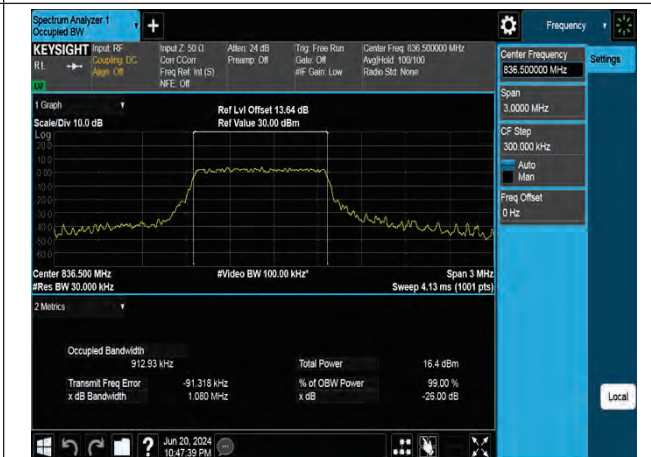
16QAM Low channel



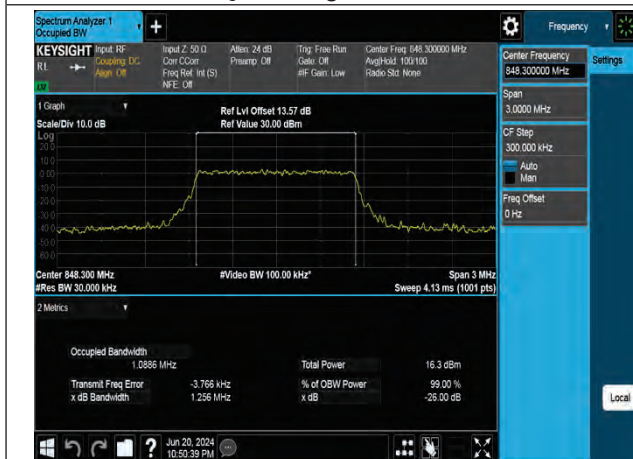
QPSK Middle channel



16QAM Middle channel



QPSK High channel



16QAM High channel

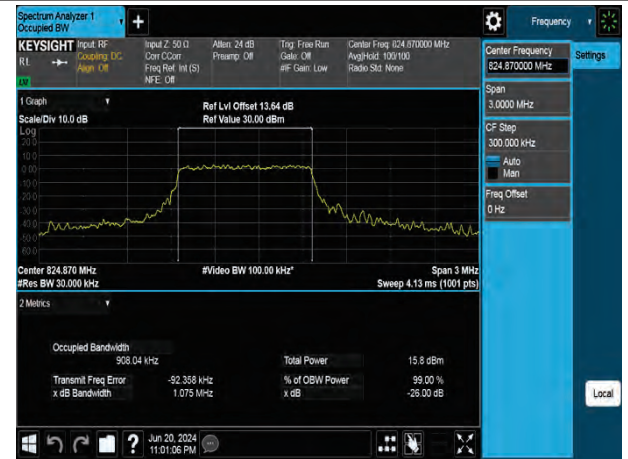


LTE Band 5, Nominal Bandwidth: 3.0MHz, OBW & 26dB Bandwidth

QPSK Low channel



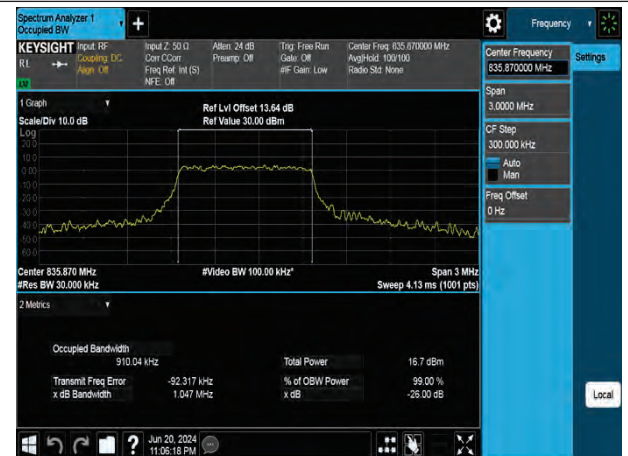
16QAM Low channel



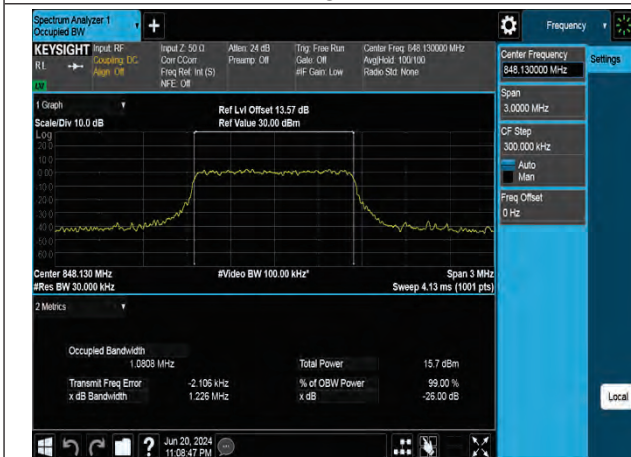
QPSK Middle channel



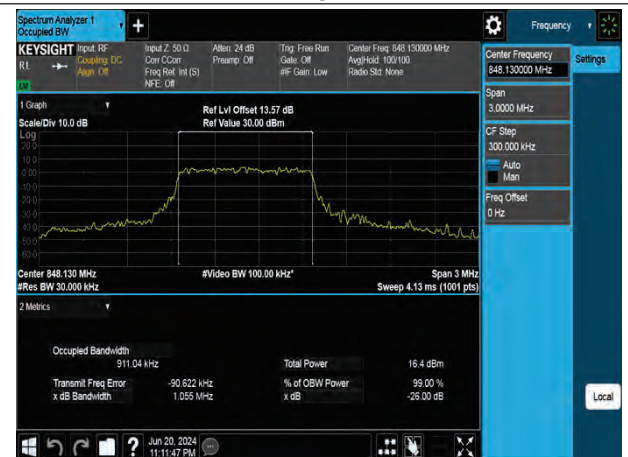
16QAM Middle channel



QPSK High channel



16QAM High channel

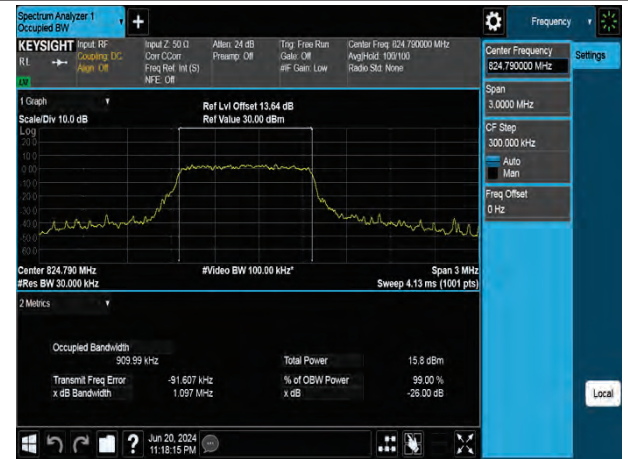


LTE Band 5, Nominal Bandwidth: 5MHz, OBW & 26dB Bandwidth

QPSK Low channel



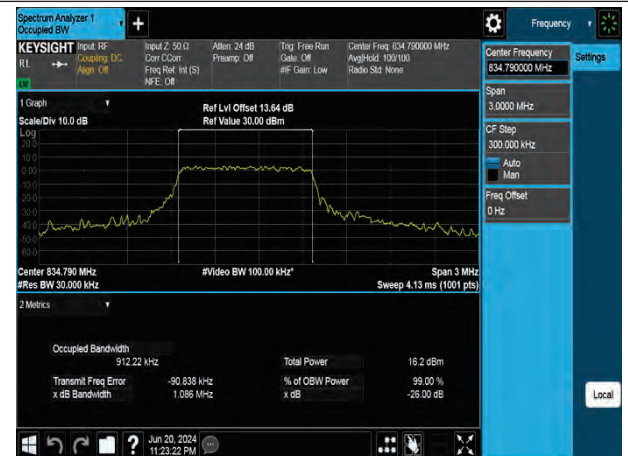
16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel



16QAM High channel

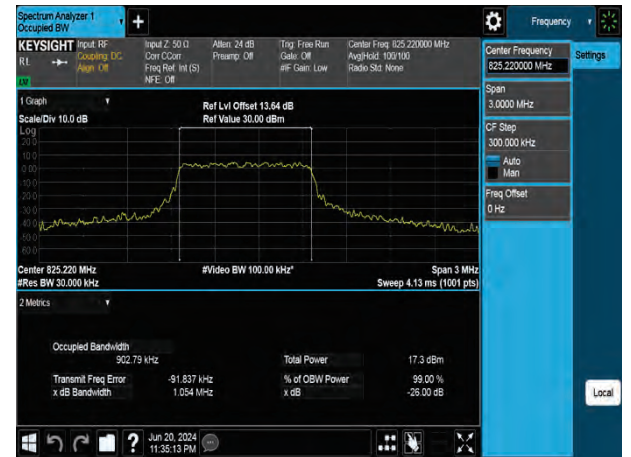


LTE Band 5, Nominal Bandwidth: 10MHz, OBW & 26dB Bandwidth

QPSK Low channel



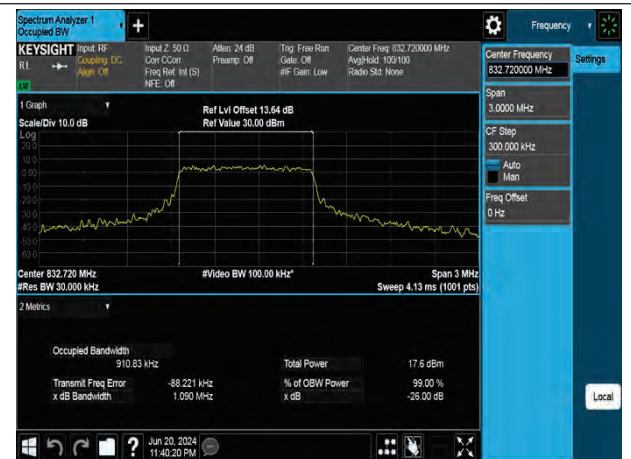
16QAM Low channel



QPSK Middle channel



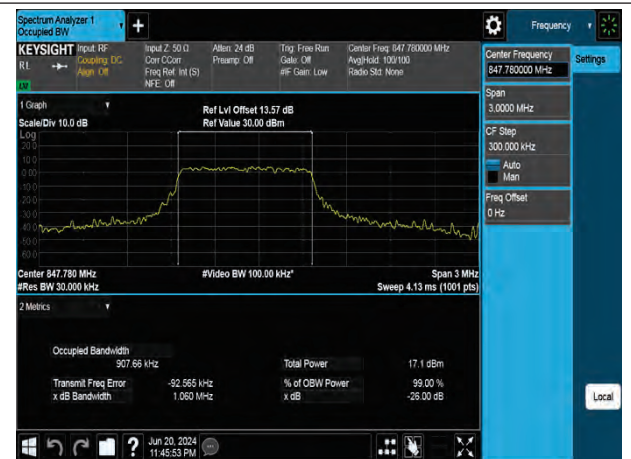
16QAM Middle channel



QPSK High channel



16QAM High channel



LTE Band 12					
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
1.4 MHz	QPSK	OBW	1.0809	1.0864	1.0824
		26dB bandwidth	1.255	1.231	1.210
	16QAM	OBW	0.90687	0.91007	0.90622
		26dB bandwidth	1.070	1.081	1.053
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
3.0 MHz	QPSK	OBW	1.0760	1.0822	1.0859
		26dB bandwidth	1.231	1.181	1.210
	16QAM	OBW	0.90821	0.91091	0.90497
		26dB bandwidth	1.066	1.061	1.058
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
5.0 MHz	QPSK	OBW	1.0787	1.0786	1.0798
		26dB bandwidth	1.207	1.209	1.233
	16QAM	OBW	0.90305	0.90749	0.90965
		26dB bandwidth	1.059	1.034	1.041
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
10.0 MHz	QPSK	OBW	1.0855	1.0851	1.0816
		26dB bandwidth	1.239	1.224	1.254
	16QAM	OBW	0.90348	0.91123	0.90612
		26dB bandwidth	1.065	1.067	1.083

LTE Band 12, Nominal Bandwidth: 1.4MHz, OBW & 26dB Bandwidth

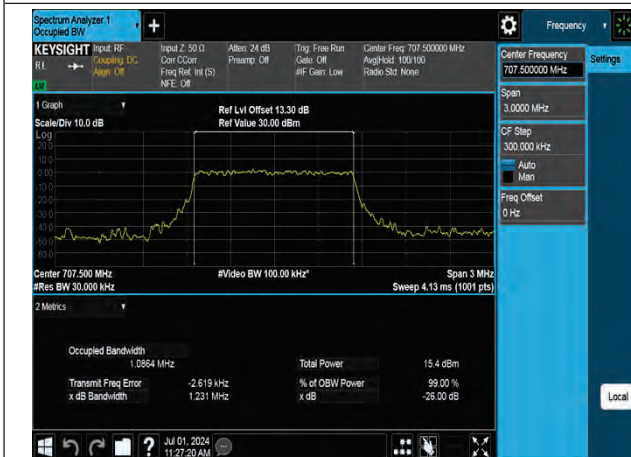
QPSK Low channel



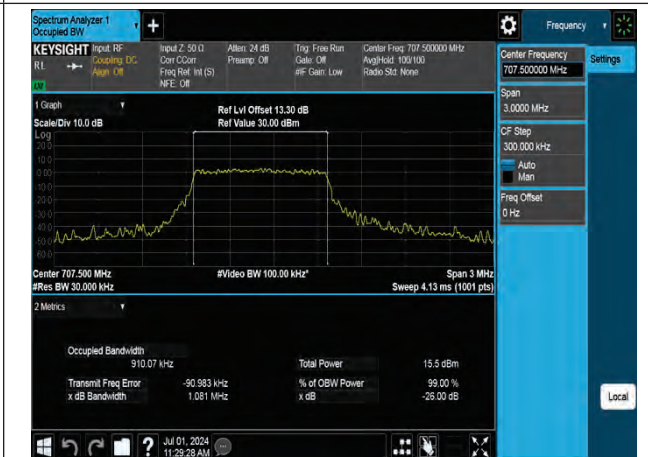
16QAM Low channel



QPSK Middle channel



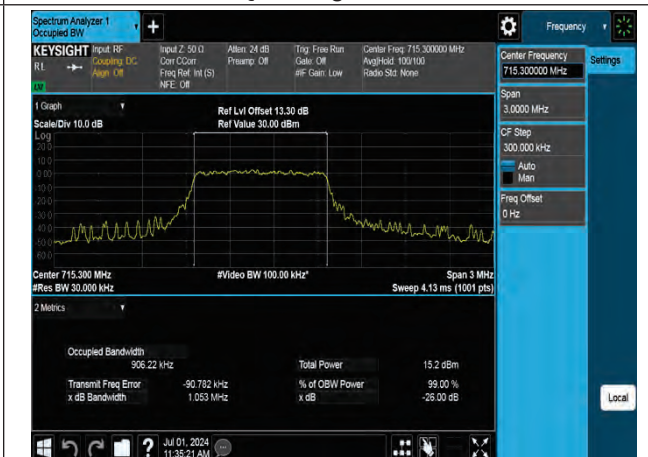
16QAM Middle channel



QPSK High channel

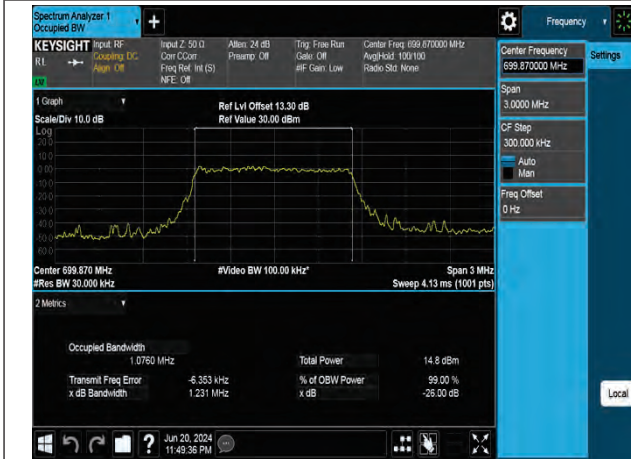


16QAM High channel



LTE Band 12, Nominal Bandwidth: 3.0MHz, OBW & 26dB Bandwidth

QPSK Low channel



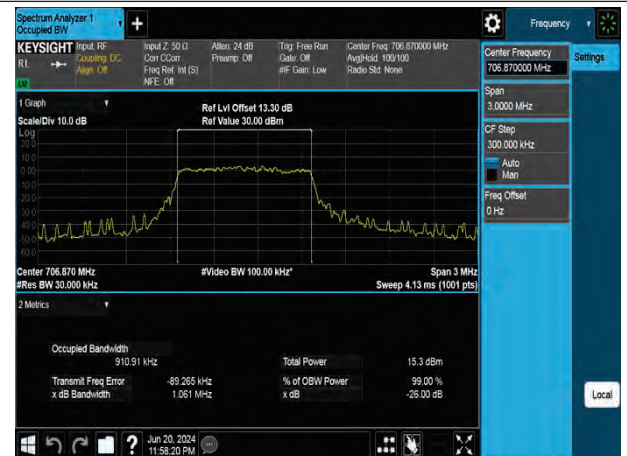
16QAM Low channel



QPSK Middle channel



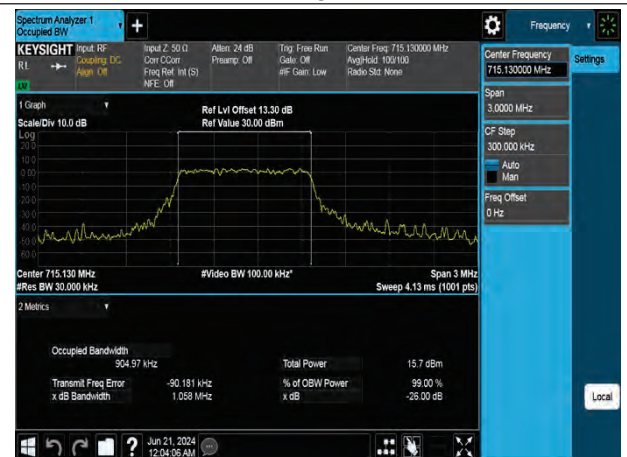
16QAM Middle channel



QPSK High channel

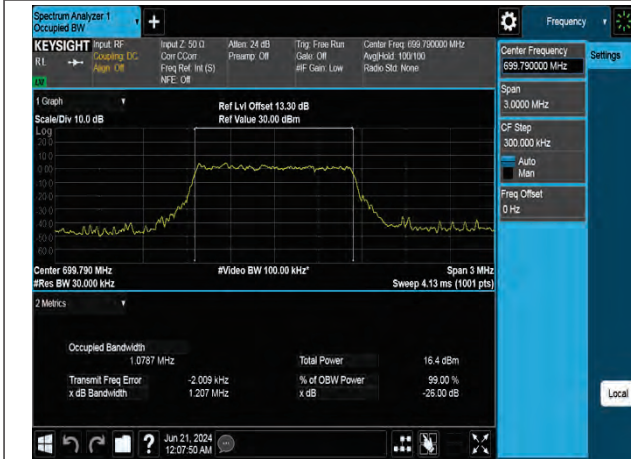


16QAM High channel

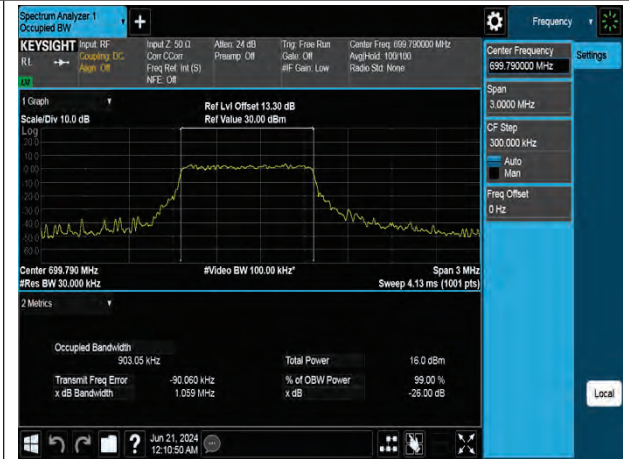


LTE Band 12, Nominal Bandwidth: 5MHz, OBW & 26dB Bandwidth

QPSK Low channel



16QAM Low channel



QPSK Middle channel



16QAM Middle channel



QPSK High channel



16QAM High channel

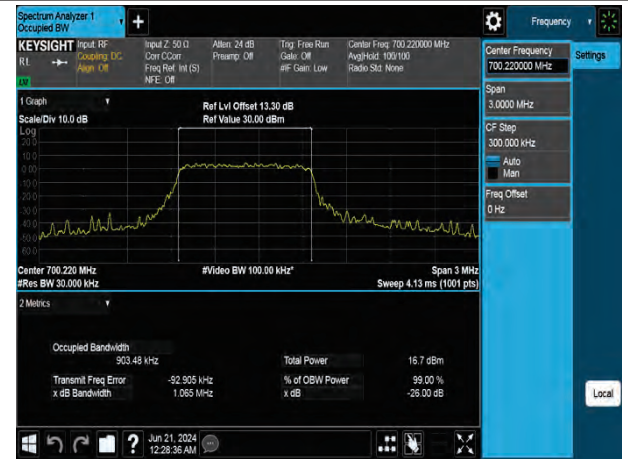


LTE Band 12, Nominal Bandwidth: 10MHz, OBW & 26dB Bandwidth

QPSK Low channel



16QAM Low channel



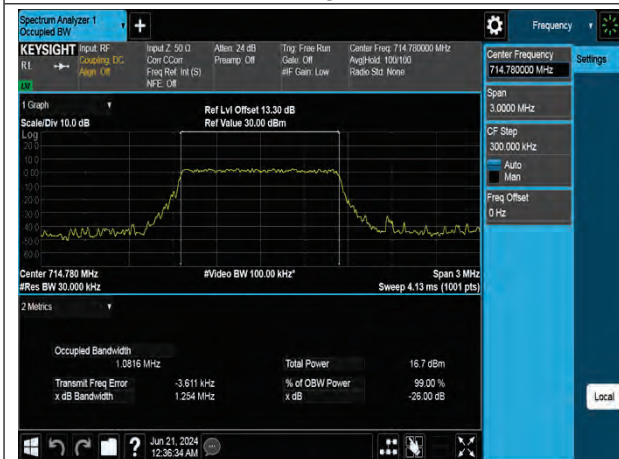
QPSK Middle channel



16QAM Middle channel



QPSK High channel



16QAM High channel



LTE Band 13					
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
5.0 MHz	QPSK	OBW	1.0831	1.0861	1.0855
		26dB bandwidth	1.222	1.221	1.251
	16QAM	OBW	0.90787	0.90649	0.90728
		26dB bandwidth	1.068	1.051	1.072
Nominal Bandwidth	Modulation	Test Item	Test result(MHz)		
			LCH	MCH	HCH
10.0 MHz	QPSK	OBW	/	1.0891	/
		26dB bandwidth	/	1.229	/
	16QAM	OBW	/	0.90614	/
		26dB bandwidth	/	1.073	/