

LTE Band 13, 5MHz, QPSK, Channel 23205

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1559.01	-54.10	3.47	5.39	2.15	-54.33	-13.00	41.33	H
2344.00	-54.89	4.45	5.63	2.15	-55.86	-13.00	42.86	V
3119.02	-51.39	5.38	7.29	2.15	-51.63	-13.00	38.63	V
3894.02	-54.07	6.11	8.75	2.15	-53.58	-13.00	40.58	V
4686.02	-54.11	6.49	9.59	2.15	-53.16	-13.00	40.16	V
5460.01	-54.84	6.91	10.54	2.15	-53.36	-13.00	40.36	H

LTE Band 13, 5MHz, QPSK, Channel 23230

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.01	-57.44	3.48	5.38	2.15	-57.69	-13.00	44.69	H
2351.00	-54.58	4.46	5.65	2.15	-55.54	-13.00	42.54	H
3118.02	-52.51	5.38	7.28	2.15	-52.76	-13.00	39.76	H
3907.02	-54.51	6.11	8.77	2.15	-54.00	-13.00	41.00	H
4685.02	-54.02	6.49	9.59	2.15	-53.07	-13.00	40.07	H
5471.01	-53.70	6.95	10.56	2.15	-52.24	-13.00	39.24	V

LTE Band 13, 5MHz, QPSK, Channel 23255

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1569.01	-52.88	3.48	5.38	2.15	-53.13	-13.00	40.13	H
2341.00	-54.32	4.45	5.62	2.15	-55.30	-13.00	42.30	V
3129.02	-52.83	5.40	7.31	2.15	-53.07	-13.00	40.07	H
3915.02	-54.18	6.12	8.78	2.15	-53.67	-13.00	40.67	V
4712.02	-53.60	6.51	9.61	2.15	-52.65	-13.00	39.65	V
5478.01	-54.50	6.98	10.57	2.15	-53.06	-13.00	40.06	V

LTE Band 66, 1.4MHz QPSK, Channel 131979

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3422.02	-47.34	5.38	8.01	-44.71	-13.00	31.71	H
5134.02	-65.16	6.86	10.09	-61.93	-13.00	48.93	V
6845.01	-57.65	7.83	11.41	-54.07	-13.00	41.07	V
8556.01	-45.57	8.57	13.01	-41.13	-13.00	28.13	V
10265.01	-58.05	9.52	13.01	-54.56	-13.00	41.56	V
11959.01	-60.16	10.24	13.01	-57.39	-13.00	44.39	V

LTE Band 66, 1.4MHz, QPSK, Channel 132322

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.02	-43.36	5.50	8.18	-40.68	-13.00	27.68	H
5240.02	-62.51	7.00	10.24	-59.27	-13.00	46.27	V
6986.01	-50.57	8.19	11.58	-47.18	-13.00	34.18	V
8731.01	-45.64	8.45	13.05	-41.04	-13.00	28.04	V
10474.01	-56.10	9.69	13.09	-52.70	-13.00	39.70	H
12241.01	-59.64	10.03	13.10	-56.57	-13.00	43.57	V

LTE Band 66, 1.4MHz, QPSK, Channel 132665

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3559.02	-44.53	5.92	8.28	-42.17	-13.00	29.17	H
5337.02	-60.73	6.96	10.37	-57.32	-13.00	44.32	V
7117.01	-47.52	8.16	11.74	-43.94	-13.00	30.94	V
8896.01	-45.40	8.84	13.08	-41.16	-13.00	28.16	V
10677.01	-56.10	9.30	13.14	-52.26	-13.00	39.26	H
12483.01	-59.68	10.22	13.19	-56.71	-13.00	43.71	V

Note: The maximum value of expanded measurement uncertainty for this test item is $U = 5.16$ dB, $k = 2$.

External antenna Measurement Results:
LTE Band 2, 1.4MHz, QPSK, Channel 18607

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3702.02	-45.74	6.42	8.48	-43.68	-13.00	30.68	H
5553.02	-43.75	7.18	10.59	-40.34	-13.00	27.34	H
7403.01	-32.70	8.13	12.08	-28.75	-13.00	15.75	H
9265.01	-42.20	9.07	13.26	-38.01	-13.00	25.01	V
11105.01	-49.48	9.81	13.18	-46.11	-13.00	33.11	H
12956.01	-47.96	10.48	13.47	-44.97	-13.00	31.97	H

LTE Band 2, 1.4MHz, QPSK, Channel 18900

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.02	-42.01	6.26	8.56	-39.71	-13.00	26.71	H
5640.02	-42.05	7.27	10.57	-38.75	-13.00	25.75	H
7522.01	-30.90	8.30	12.22	-26.98	-13.00	13.98	H
9412.01	-41.17	9.10	13.35	-36.92	-13.00	23.92	V
11281.01	-47.74	9.88	13.14	-44.48	-13.00	31.48	H
13161.01	-45.16	10.67	13.73	-42.10	-13.00	29.10	H

LTE Band 2, 1.4MHz, QPSK, Channel 19193

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3819.02	-39.30	6.08	8.65	-36.73	-13.00	23.73	H
5728.02	-37.56	7.30	10.55	-34.31	-13.00	21.31	H
7639.01	-30.32	8.15	12.31	-26.16	-13.00	13.16	H
9556.01	-40.06	9.34	13.34	-36.06	-13.00	23.06	V
11457.01	-44.51	9.92	13.11	-41.32	-13.00	28.32	H
13372.01	-42.94	10.57	14.02	-39.49	-13.00	26.49	H

LTE Band 5, 1.4MHz, QPSK, Channel 20407

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1650.01	-52.41	3.57	5.23	2.15	-52.90	-13.00	39.90	H
2474.00	-49.68	4.60	6.02	2.15	-50.41	-13.00	37.41	V
3299.02	-45.68	5.29	7.72	2.15	-45.40	-13.00	32.40	V
4119.02	-54.89	6.04	9.02	2.15	-54.06	-13.00	41.06	V
4934.01	-54.01	6.72	9.83	2.15	-53.05	-13.00	40.05	V
5784.01	-53.04	7.21	10.54	2.15	-51.86	-13.00	38.86	V

LTE Band 5, 1.4MHz, QPSK, Channel 20525

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.01	-55.19	3.58	5.19	2.15	-55.73	-13.00	42.73	H
2510.00	-48.40	4.63	6.12	2.15	-49.06	-13.00	36.06	V
3346.02	-47.40	5.31	7.83	2.15	-47.03	-13.00	34.03	V
4176.02	-54.56	6.15	9.08	2.15	-53.78	-13.00	40.78	V
5024.01	-54.56	6.56	9.93	2.15	-53.34	-13.00	40.34	V
5864.01	-53.00	7.28	10.53	2.15	-51.90	-13.00	38.90	H

LTE Band 5, 1.4MHz, QPSK, Channel 20643

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1697.01	-54.60	3.60	5.15	2.15	-55.20	-13.00	42.20	H
2545.00	-47.31	4.66	6.18	2.15	-47.94	-13.00	34.94	V
3394.02	-48.66	5.36	7.95	2.15	-48.22	-13.00	35.22	V
4252.02	-54.75	6.24	9.15	2.15	-53.99	-13.00	40.99	H
5099.01	-53.78	6.77	10.04	2.15	-52.66	-13.00	39.66	H
5929.01	-52.72	7.47	10.51	2.15	-51.83	-13.00	38.83	H

LTE Band 7, 5 MHz, QPSK, Channel 20775

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5007.02	-37.74	6.59	9.91	-34.42	-25.00	9.42	V
7510.01	-32.77	8.35	12.21	-28.91	-25.00	3.91	V
10020.01	-44.27	9.24	12.91	-40.60	-25.00	15.60	H
12529.01	-47.90	10.26	13.22	-44.94	-25.00	19.94	H
14999.00	-44.85	11.21	14.00	-42.06	-25.00	17.06	V
17533.00	-44.55	12.85	14.95	-42.45	-25.00	17.45	H

LTE Band 7, 5 MHz, QPSK, Channel 21100

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5076.02	-36.68	6.70	10.01	-33.37	-25.00	8.37	V
7611.01	-31.45	8.02	12.29	-27.18	-25.00	2.18	V
10156.01	-45.79	9.37	12.96	-42.20	-25.00	17.20	V
12681.01	-47.08	10.33	13.31	-44.10	-25.00	19.10	H
15192.00	-45.64	11.40	13.88	-43.16	-25.00	18.16	H
17741.00	-44.48	12.41	15.24	-41.65	-25.00	16.65	V

LTE Band 7, 5 MHz, QPSK, Channel 21425

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5140.02	-33.98	6.87	10.10	-30.75	-25.00	5.75	V
7704.01	-30.83	8.42	12.36	-26.89	-25.00	1.89	H
10284.01	-45.73	9.59	13.01	-42.31	-25.00	17.31	H
12839.01	-47.26	10.67	13.40	-44.53	-25.00	19.53	H
15423.00	-45.14	11.43	13.75	-42.82	-25.00	17.82	V
17990.00	-43.73	12.90	15.59	-41.04	-25.00	16.04	H

LTE Band 12, 1.4MHz, QPSK, Channel 23017

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1399.01	-49.08	3.23	4.97	2.15	-49.49	-13.00	36.49	V
2099.00	-46.63	4.19	4.90	2.15	-48.07	-13.00	35.07	V
2799.00	-46.18	4.91	6.64	2.15	-46.60	-13.00	33.60	V
3497.02	-54.46	5.51	8.19	2.15	-53.93	-13.00	40.93	H
4200.02	-54.30	6.21	9.10	2.15	-53.56	-13.00	40.56	V
4893.01	-53.81	6.73	9.79	2.15	-52.90	-13.00	39.90	V

LTE Band 12, 1.4MHz, QPSK, Channel 23095

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.01	-39.33	3.25	5.06	2.15	-39.67	-13.00	26.67	V
2123.00	-47.79	4.21	4.97	2.15	-49.18	-13.00	36.18	V
2830.00	-40.04	4.95	6.69	2.15	-40.45	-13.00	27.45	V
3538.02	-54.92	5.70	8.25	2.15	-54.52	-13.00	41.52	V
4245.02	-54.67	6.24	9.15	2.15	-53.91	-13.00	40.91	V
4964.01	-54.13	6.67	9.86	2.15	-53.09	-13.00	40.09	V

LTE Band 12, 1.4MHz, QPSK, Channel 23173

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1431.01	-36.24	3.28	5.14	2.15	-36.53	-13.00	23.53	V
2146.00	-46.35	4.24	5.04	2.15	-47.70	-13.00	34.70	V
2862.00	-40.35	4.96	6.75	2.15	-40.71	-13.00	27.71	V
3577.02	-52.24	6.10	8.31	2.15	-52.18	-13.00	39.18	V
4278.02	-54.49	6.21	9.18	2.15	-53.67	-13.00	40.67	H
5020.01	-54.03	6.57	9.93	2.15	-52.82	-13.00	39.82	H

LTE Band 13, 5MHz, QPSK, Channel 23205

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1559.01	-43.81	3.47	5.39	2.15	-44.04	-13.00	31.04	V
2339.00	-53.96	4.44	5.62	2.15	-54.93	-13.00	41.93	V
3132.02	-52.98	5.39	7.32	2.15	-53.20	-13.00	40.20	H
3900.02	-54.23	6.11	8.76	2.15	-53.73	-13.00	40.73	V
4668.02	-54.33	6.48	9.57	2.15	-53.39	-13.00	40.39	V
5467.01	-54.08	6.93	10.55	2.15	-52.61	-13.00	39.61	V

LTE Band 13, 5MHz, QPSK, Channel 23230

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.01	-46.74	3.48	5.38	2.15	-46.99	-13.00	33.99	V
2347.00	-53.89	4.45	5.64	2.15	-54.85	-13.00	41.85	V
3131.02	-52.98	5.39	7.31	2.15	-53.21	-13.00	40.21	H
3902.02	-53.95	6.11	8.76	2.15	-53.45	-13.00	40.45	V
4682.02	-53.92	6.49	9.58	2.15	-52.98	-13.00	39.98	V
5463.01	-53.81	6.92	10.55	2.15	-52.33	-13.00	39.33	V

LTE Band 13, 5MHz, QPSK, Channel 23255

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1569.01	-43.41	3.48	5.38	2.15	-43.66	-13.00	30.66	V
2354.00	-52.75	4.46	5.66	2.15	-53.70	-13.00	40.70	V
3138.02	-53.09	5.39	7.33	2.15	-53.30	-13.00	40.30	H
3913.02	-54.63	6.12	8.78	2.15	-54.12	-13.00	41.12	V
4698.02	-54.41	6.50	9.60	2.15	-53.46	-13.00	40.46	V
5499.01	-54.45	7.06	10.60	2.15	-53.06	-13.00	40.06	V

LTE Band 66, 1.4MHz QPSK, Channel 131979

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3422.02	-47.64	5.38	8.01	-45.01	-13.00	32.01	H
5136.02	-64.72	6.86	10.09	-61.49	-13.00	48.49	V
6846.01	-56.43	7.83	11.42	-52.84	-13.00	39.84	V
8557.01	-46.10	8.57	13.01	-41.66	-13.00	28.66	V
10265.01	-57.21	9.52	13.01	-53.72	-13.00	40.72	H
11977.01	-60.00	10.16	13.00	-57.16	-13.00	44.16	V

LTE Band 66, 1.4MHz, QPSK, Channel 132322

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.02	-43.17	5.50	8.18	-40.49	-13.00	27.49	H
5241.02	-63.80	7.00	10.24	-60.56	-13.00	47.56	V
6987.01	-51.27	8.20	11.58	-47.89	-13.00	34.89	V
8732.01	-47.98	8.46	13.05	-43.39	-13.00	30.39	V
10472.01	-55.39	9.69	13.09	-51.99	-13.00	38.99	V
12178.01	-59.97	10.12	13.07	-57.02	-13.00	44.02	V

LTE Band 66, 1.4MHz, QPSK, Channel 132665

Frequency (MHz)	P _{Mea} (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3559.02	-43.44	5.92	8.28	-41.08	-13.00	28.08	H
5337.02	-61.45	6.96	10.37	-58.04	-13.00	45.04	V
7118.01	-51.89	8.16	11.74	-48.31	-13.00	35.31	H
8896.01	-46.52	8.84	13.08	-42.28	-13.00	29.28	V
10677.01	-54.51	9.30	13.14	-50.67	-13.00	37.67	H
12505.01	-59.77	10.19	13.20	-56.76	-13.00	43.76	V

Note: The maximum value of expanded measurement uncertainty for this test item is $U = 5.16$ dB, $k = 2$.

A.3 FREQUENCY STABILITY

A.3.1 Method of Measurement

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of R&S CMW500.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30°C.
3. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on middle channel for each LTE Band, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50°C.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the center channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 °C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5°C during the measurement procedure.

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of between 10.2VDC and 13.8VDC, with a nominal voltage of 12VDC. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress.

A.3.2 Measurement results

LTE Band 2, 20MHz bandwidth QPSK (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	12	1850.865	1909.119		
50				-6.45	0.0034
40				-7.30	0.0039
30				-9.68	0.0051
10				-5.97	0.0032
0				-8.13	0.0043
-10				-9.37	0.0050
-20				-11.20	0.0060
-30				-6.14	0.0033

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
10.2	20	1850.865	1909.119	-7.85	0.0042
13.8				-7.68	0.0041

LTE Band 5, 10MHz bandwidth QPSK (worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	12	824.433	848.567		
50				-2.98	0.0036
40				-2.96	0.0035
30				-3.35	0.0040
10				-2.99	0.0036
0				-3.42	0.0041
-10				-2.45	0.0029
-20				-2.69	0.0032
-30				-2.43	0.0029

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
10.2	20	824.433	848.567	-2.90	0.0035
13.8				-2.15	0.0026

LTE Band 7, 20MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	12	2500.593	2569.407		
50				-10.01	0.0039
40				-11.04	0.0044
30				-10.17	0.0040
10				-7.75	0.0031
0				-11.01	0.0043
-10				-10.44	0.0041
-20				-5.95	0.0023
-30				-8.83	0.0035

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
10.2	20	2500.593	2569.407	-10.36	0.0041
13.8				-9.11	0.0036

LTE Band 12, 10MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	12	699.481	715.503		
50				-3.40	0.0048
40				-3.48	0.0049
30				2.72	0.0038
10				-3.82	0.0054
0				3.46	0.0049
-10				-2.96	0.0042
-20				-3.46	0.0049
-30				-3.02	0.0043

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
10.2	20	699.481	715.503	-3.33	0.0047
13.8				-3.25	0.0046

LTE Band 13, 10MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	12	777.497	786.519		
50				2.32	0.0030
40				3.02	0.0039
30				3.30	0.0042
10				3.29	0.0042
0				3.82	0.0049
-10				-2.17	0.0028
-20				3.32	0.0042
-30				3.39	0.0043

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
10.2	20	777.497	786.519	3.62	0.0046
13.8				3.40	0.0043

LTE Band 66, 20MHz bandwidth QPSK (worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
20	12	1710.849	1779.135		
50				-6.59	0.0038
40				-6.28	0.0036
30				-5.76	0.0033
10				-6.55	0.0038
0				-7.60	0.0044
-10				-8.33	0.0048
-20				-6.47	0.0037
-30				-6.97	0.0040

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	F _L (MHz)	F _H (MHz)	Offset(Hz)	Frequency error(ppm)
10.2	20	1710.849	1779.135	-6.58	0.0038
13.8				-5.52	0.0032

A.4 OCCUPIED BANDWIDTH

Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the mid frequencies frequency. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.

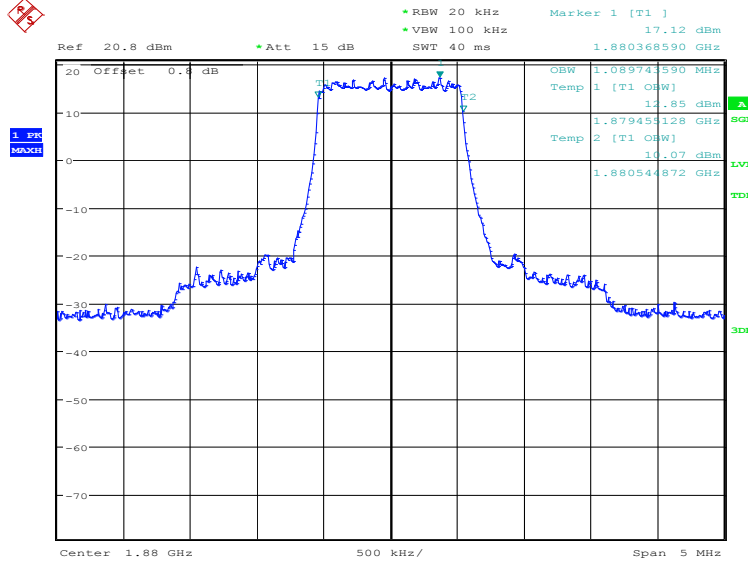
The measurement method is from ANSI C63.26:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts.
- b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW.
- c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
- d) Set the detection mode to peak, and the trace mode to max-hold.

LTE band 2, 1.4MHz (99%)

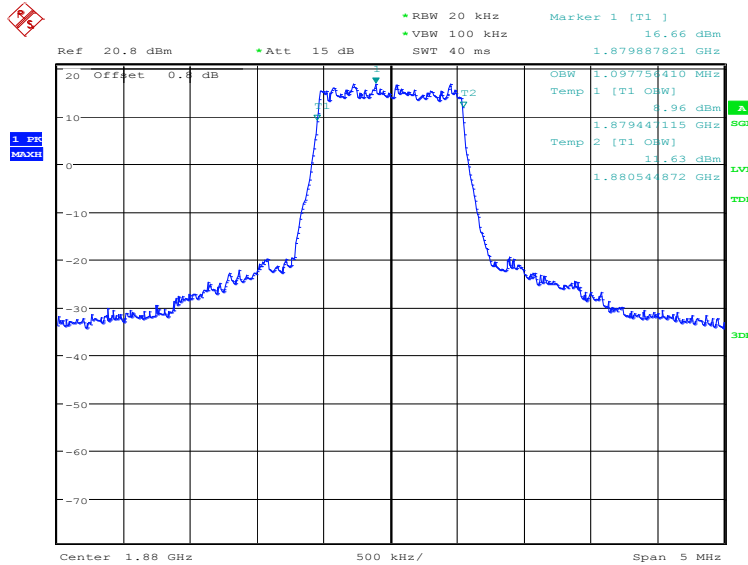
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1880.0	QPSK	16QAM
	1089.74	1097.76

LTE band 2, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:02:38

LTE band 2, 1.4MHz Bandwidth, 16QAM (99% BW)

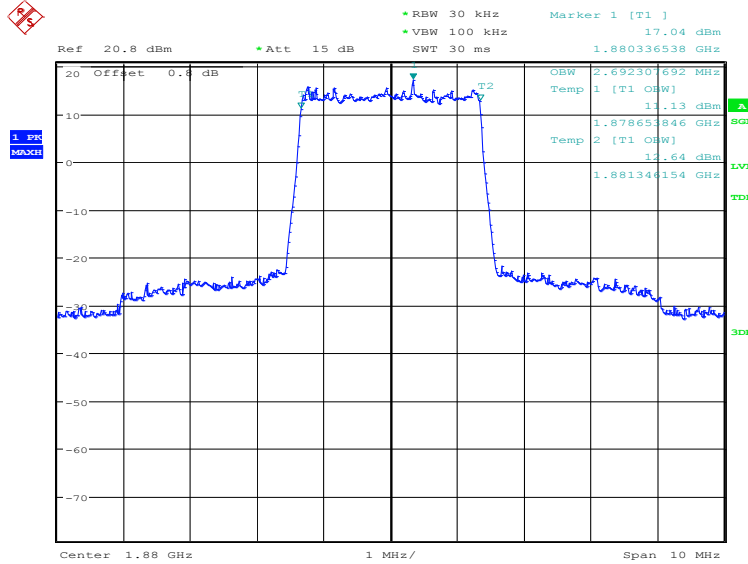


Date: 2.APR.2020 17:04:02

LTE band 2, 3MHz (99%)

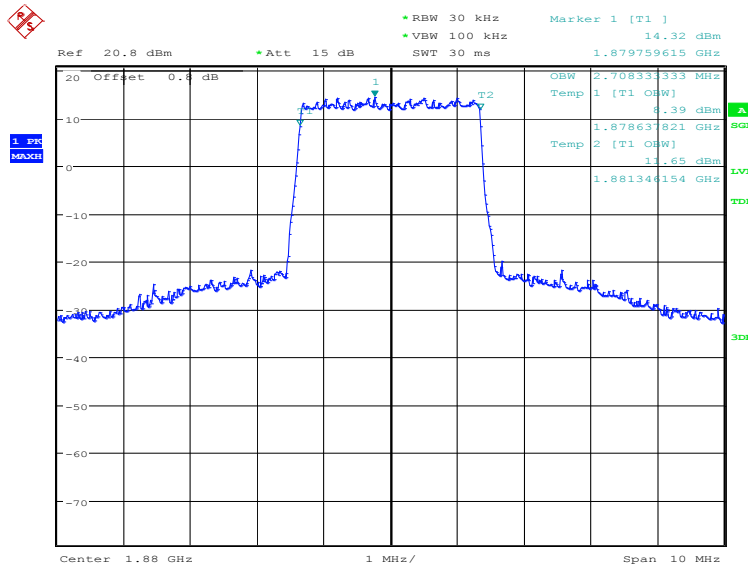
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1880.0	QPSK	16QAM
	2692.31	2708.33

LTE band 2, 3MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:05:28

LTE band 2, 3MHz Bandwidth, 16QAM (99% BW)

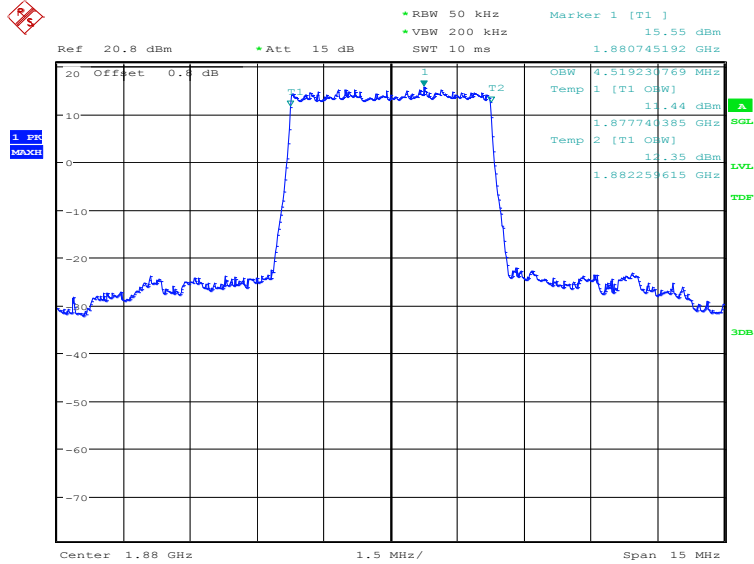


Date: 2.APR.2020 17:06:52

LTE band 2, 5MHz (99%)

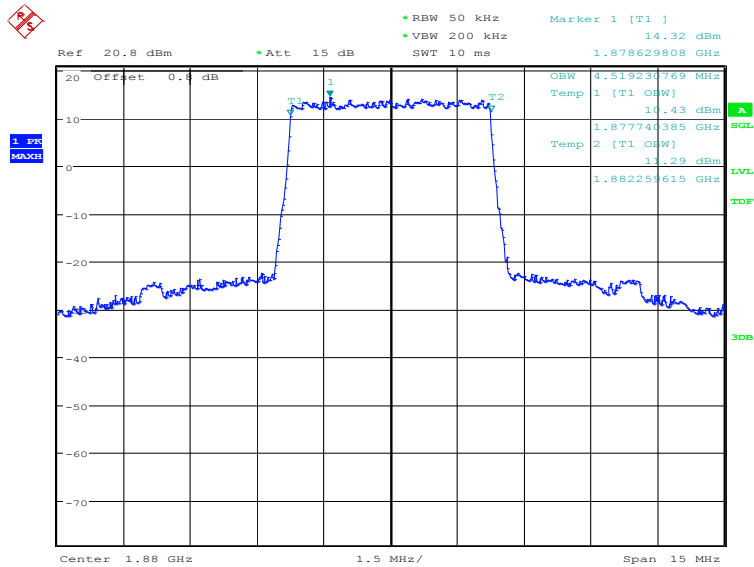
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1880.0	QPSK	16QAM
	4519.23	4519.23

LTE band 2, 5MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:08:17

LTE band 2, 5MHz Bandwidth, 16QAM (99% BW)

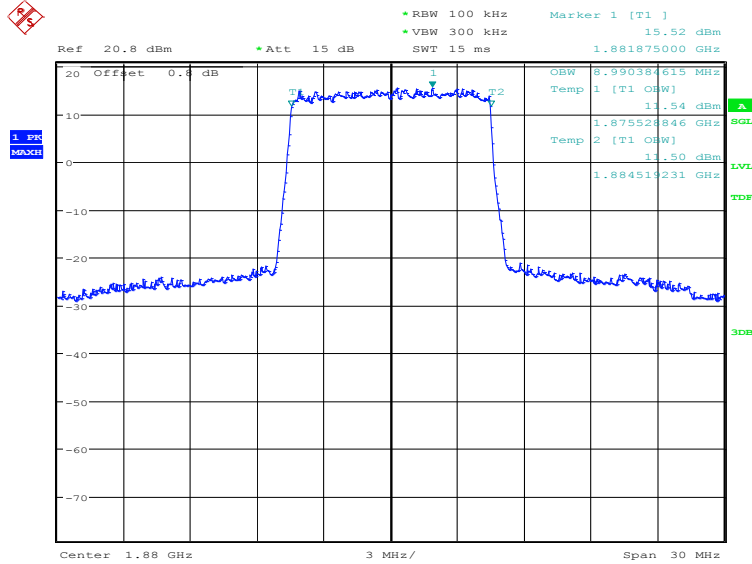


Date: 2.APR.2020 17:09:41

LTE band 2, 10MHz (99%)

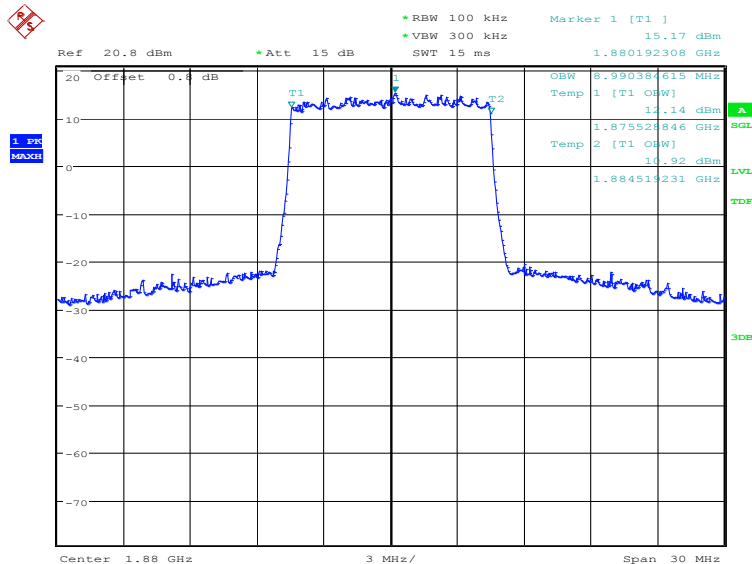
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1880.0	QPSK	16QAM
	8990.38	8990.38

LTE band 2, 10MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:11:07

LTE band 2, 10MHz Bandwidth, 16QAM (99% BW)

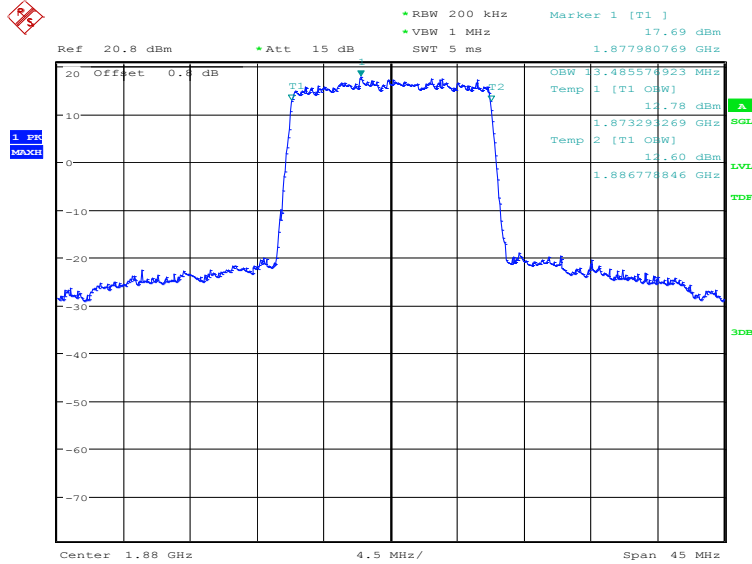


Date: 2.APR.2020 17:12:31

LTE band 2, 15MHz (99%)

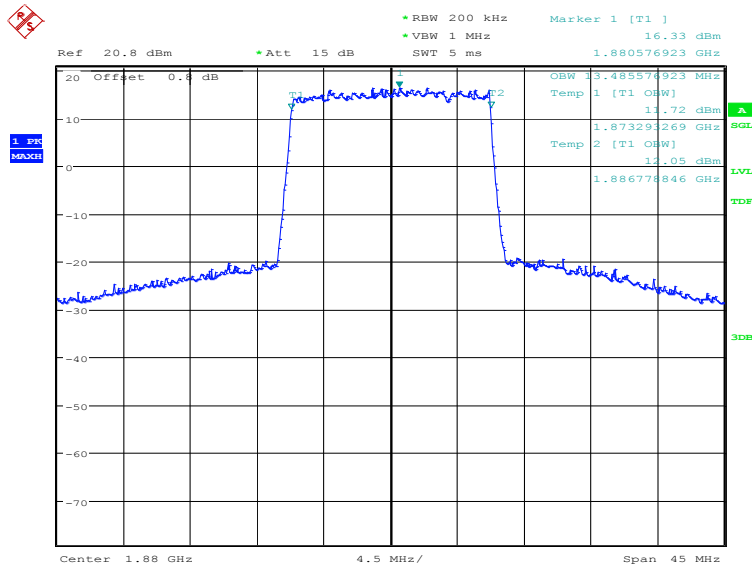
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1880.0	QPSK	16QAM
	13485.58	13485.58

LTE band 2, 15MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:13:56

LTE band 2, 15MHz Bandwidth, 16QAM (99% BW)

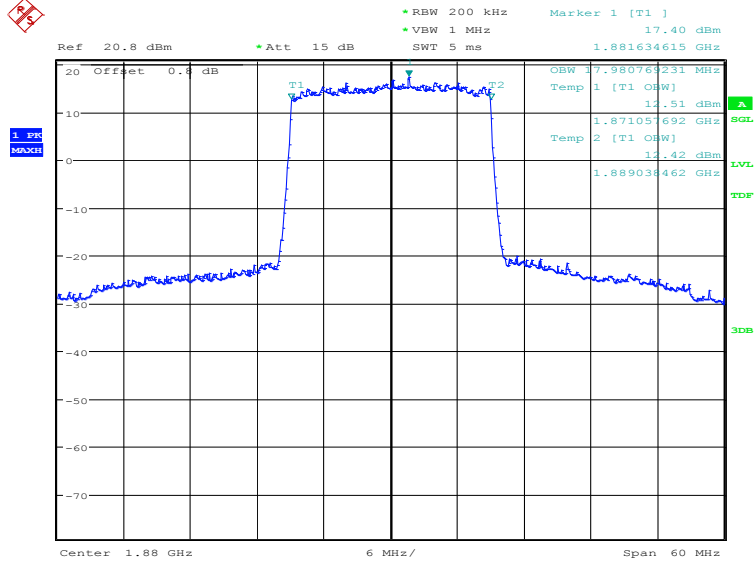


Date: 2.APR.2020 17:15:21

LTE band 2, 20MHz (99%)

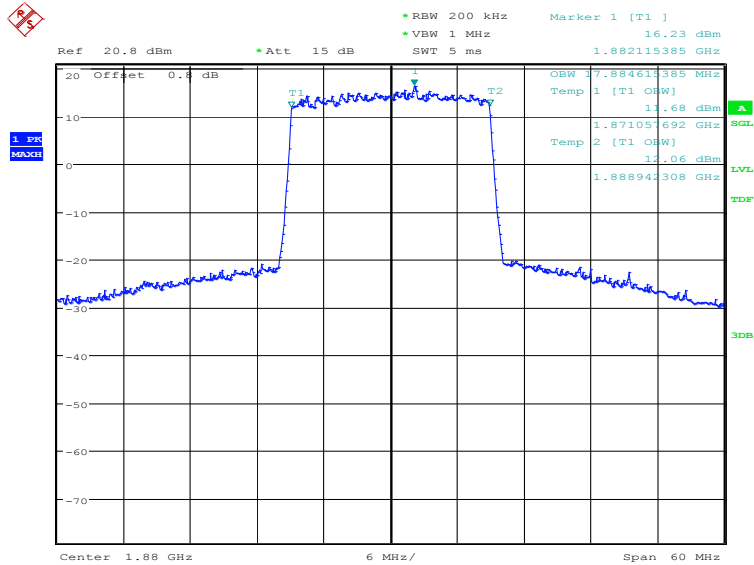
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1880.0	QPSK	16QAM
	17980.77	17884.62

LTE band 2, 20MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:16:46

LTE band 2, 20MHz Bandwidth, 16QAM (99% BW)

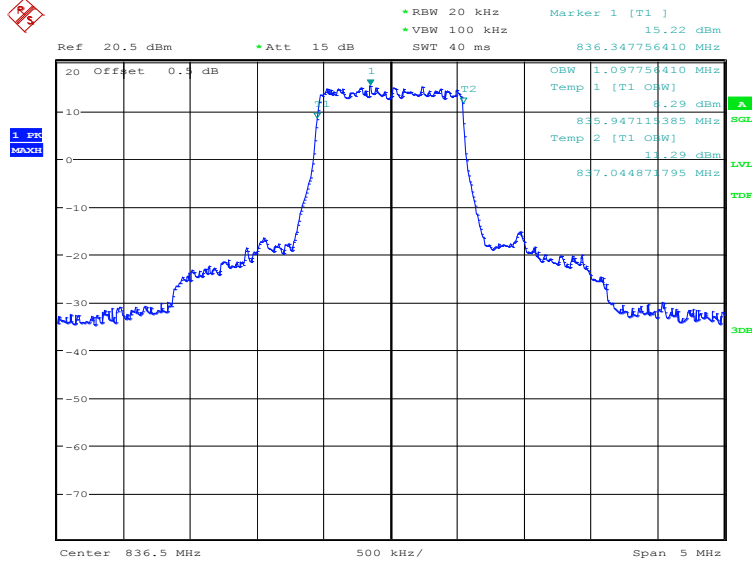


Date: 2.APR.2020 17:18:10

LTE band 5, 1.4MHz (99%)

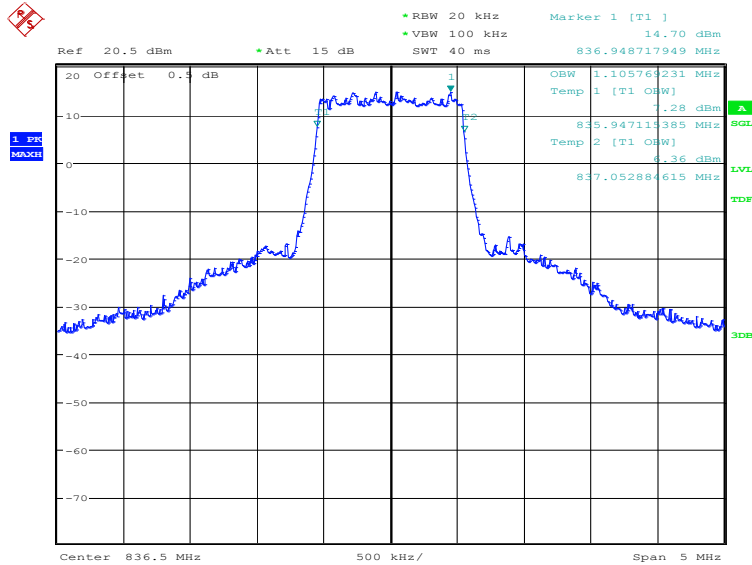
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
836.5	QPSK	16QAM
	1097.76	1105.77

LTE band 5, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:20:26

LTE band 5, 1.4MHz Bandwidth, 16QAM (99% BW)

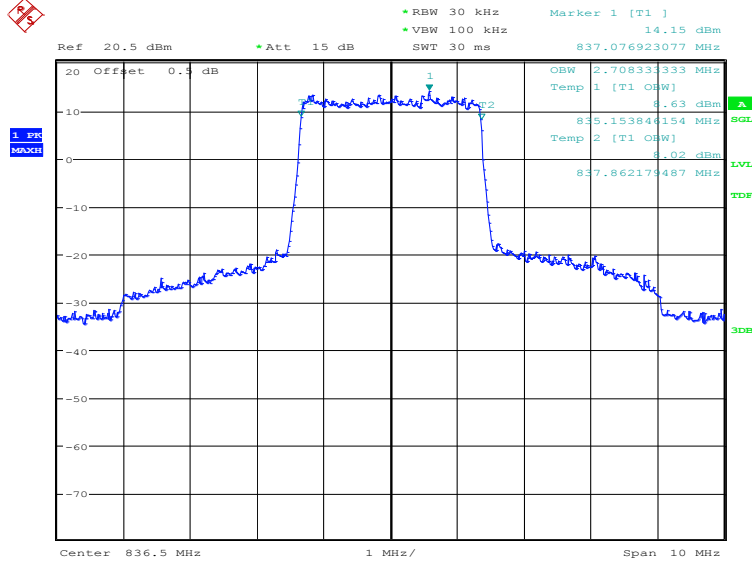


Date: 2.APR.2020 17:21:50

LTE band 5, 3MHz (99%)

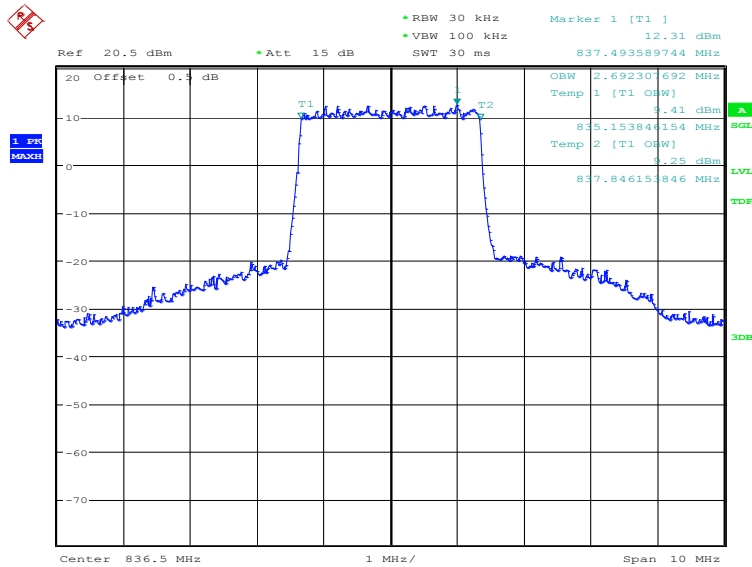
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
836.5	QPSK	16QAM
	2708.33	2692.31

LTE band 5, 3MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:23:16

LTE band 5, 3MHz Bandwidth, 16QAM (99% BW)

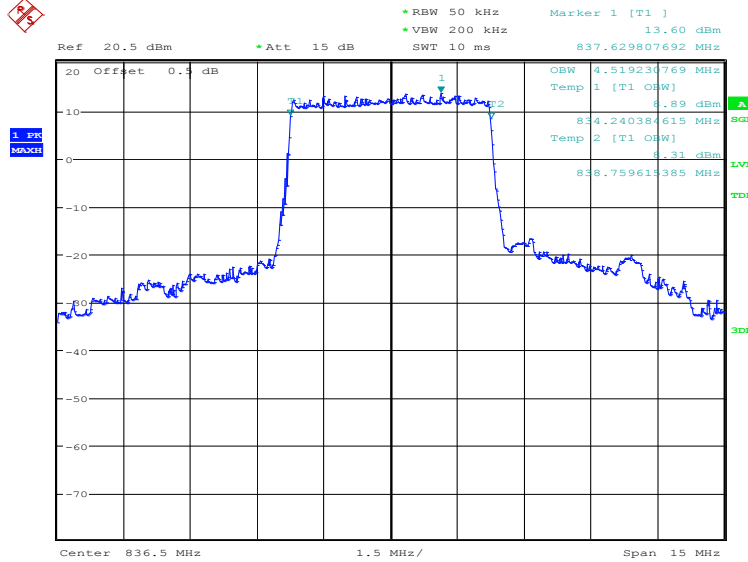


Date: 2.APR.2020 17:24:40

LTE band 5, 5MHz (99%)

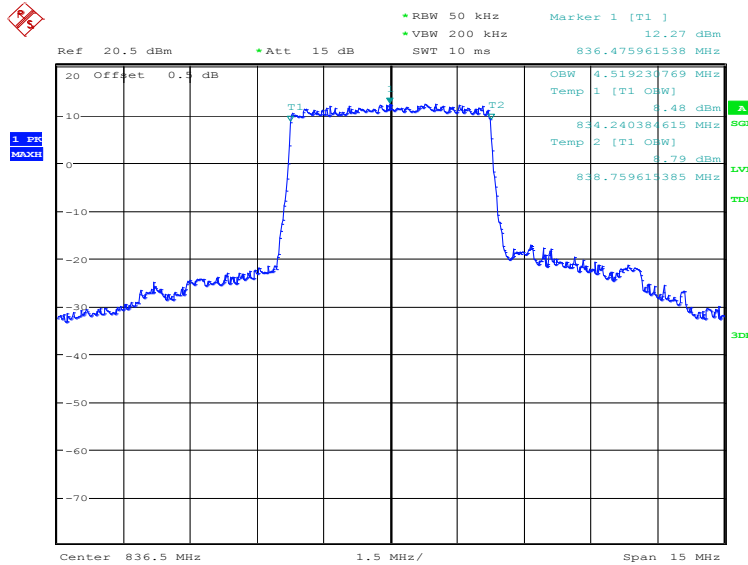
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
836.5	QPSK	16QAM
	4519.23	4519.23

LTE band 5, 5MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:26:06

LTE band 5, 5MHz Bandwidth, 16QAM (99% BW)

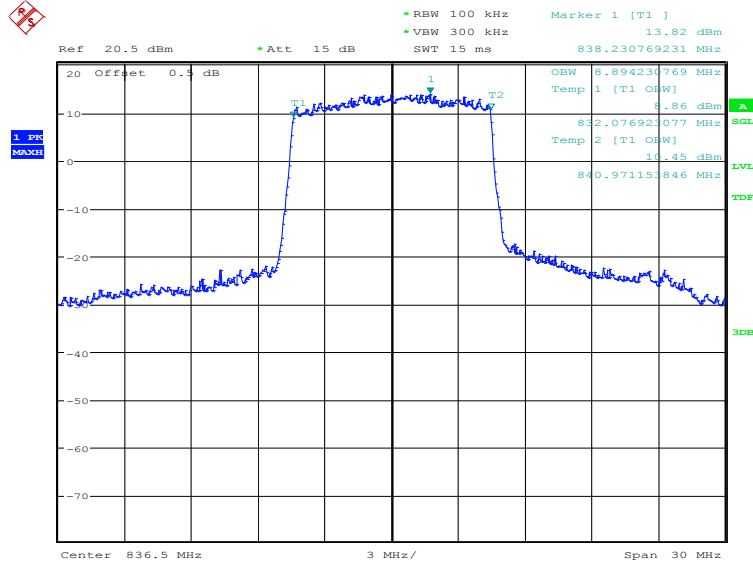


Date: 2.APR.2020 17:27:30

LTE band 5, 10MHz (99%)

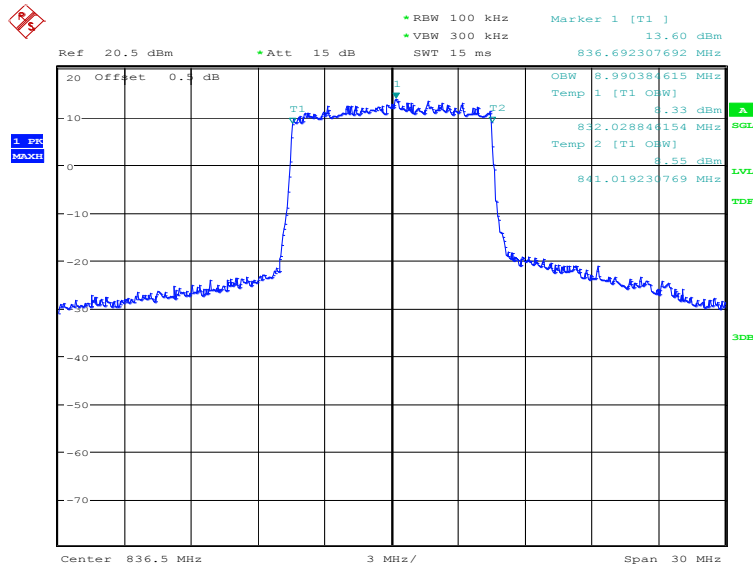
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
	836.5	QPSK
8894.23		8990.38

LTE band 5, 10MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:28:56

LTE band 5, 10MHz Bandwidth, 16QAM (99% BW)

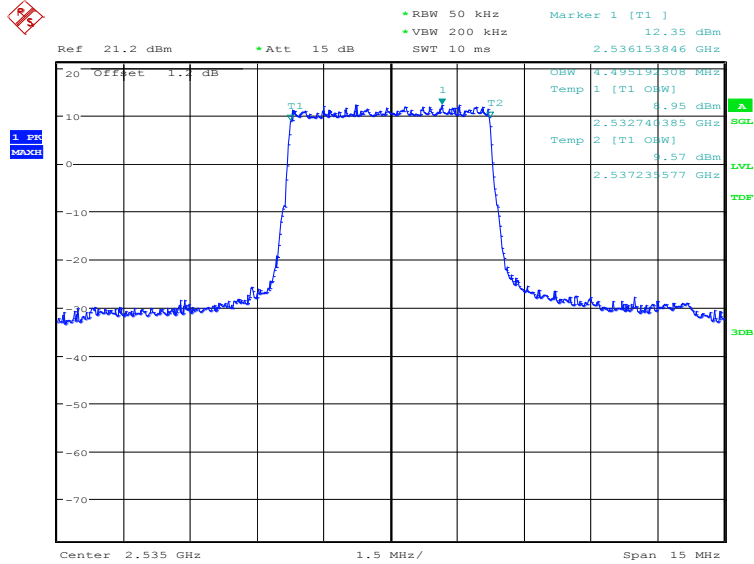


Date: 2.APR.2020 17:30:20

LTE band 7, 5MHz (99%)

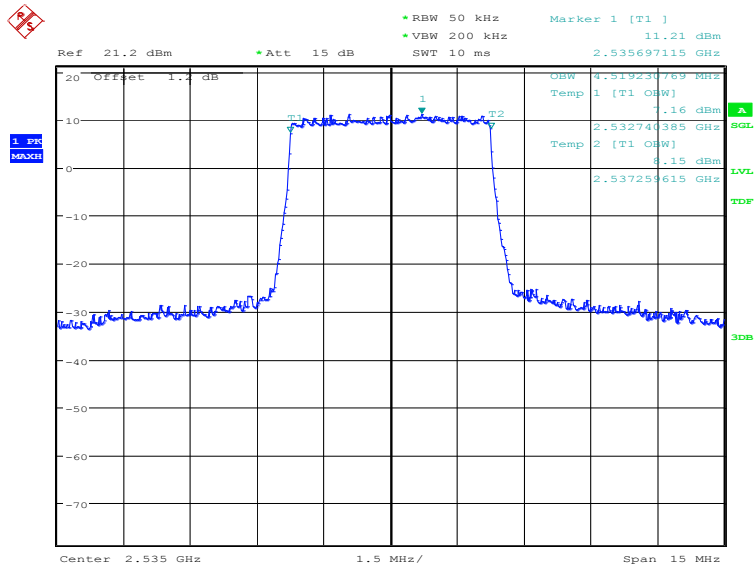
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
2535.0	QPSK	16QAM
	4495.19	4519.23

LTE band 7, 5MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:31:47

LTE band 7, 5MHz Bandwidth, 16QAM (99% BW)

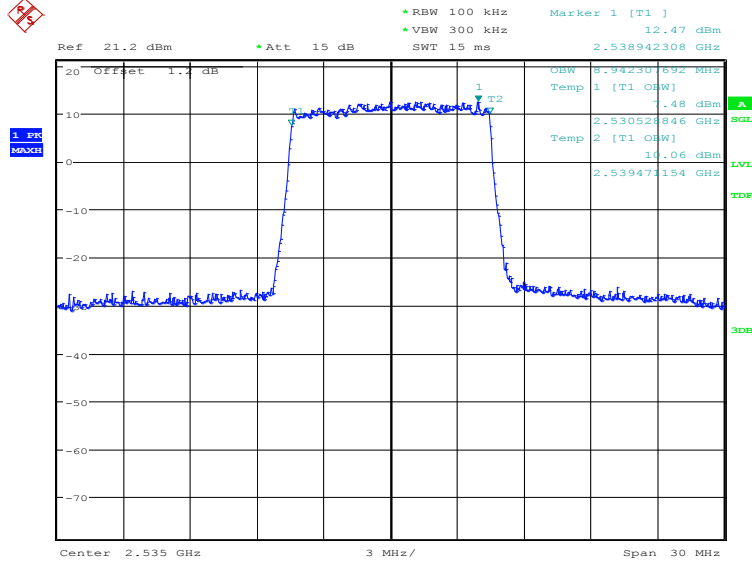


Date: 2.APR.2020 17:33:11

LTE band 7, 10MHz (99%)

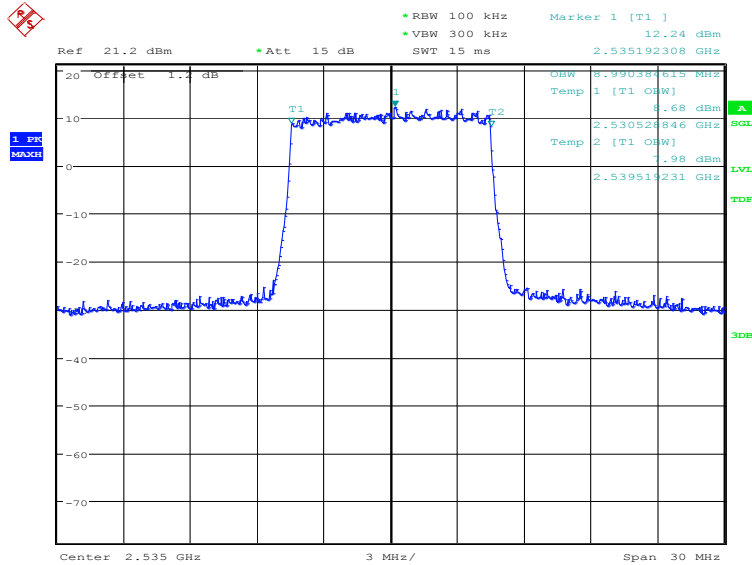
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
2535.0	QPSK	16QAM
	8942.31	8990.38

LTE band 7, 10MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:34:37

LTE band 7, 10MHz Bandwidth, 16QAM (99% BW)

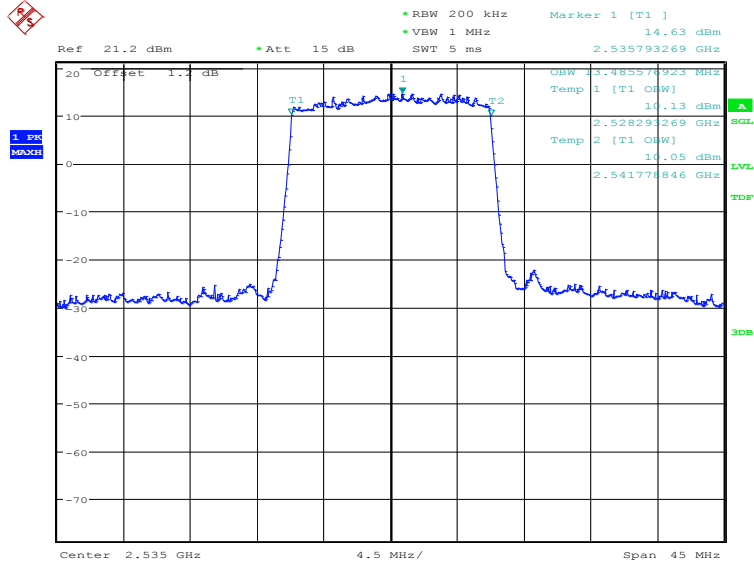


Date: 2.APR.2020 17:36:01

LTE band 7, 15MHz (99%)

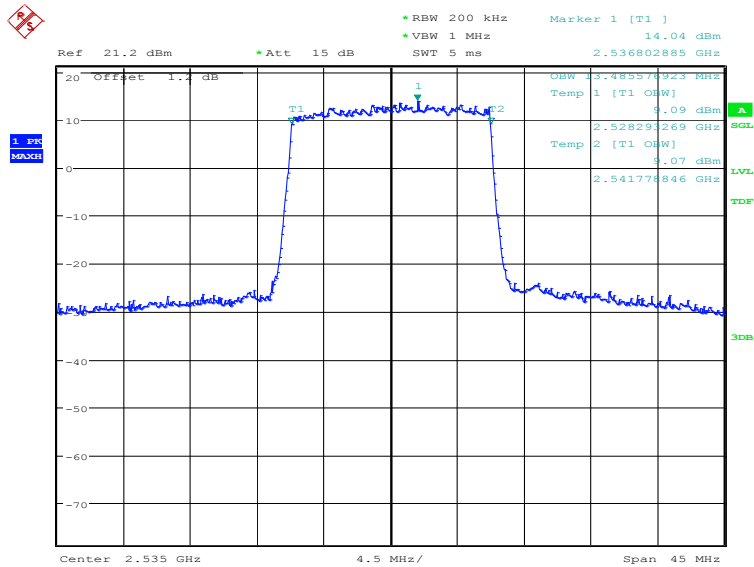
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
2535.0	QPSK	16QAM
	13485.58	13485.58

LTE band 7, 15MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:37:27

LTE band 7, 15MHz Bandwidth, 16QAM (99% BW)

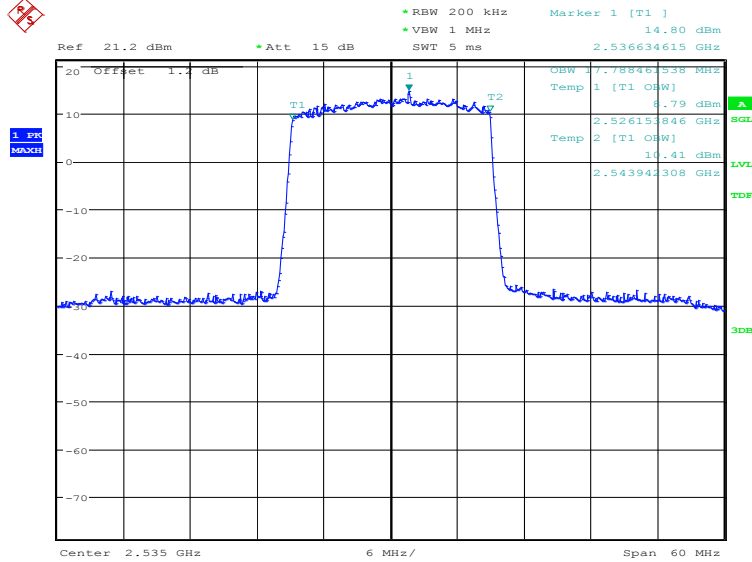


Date: 2.APR.2020 17:38:51

LTE band 7, 20MHz (99%)

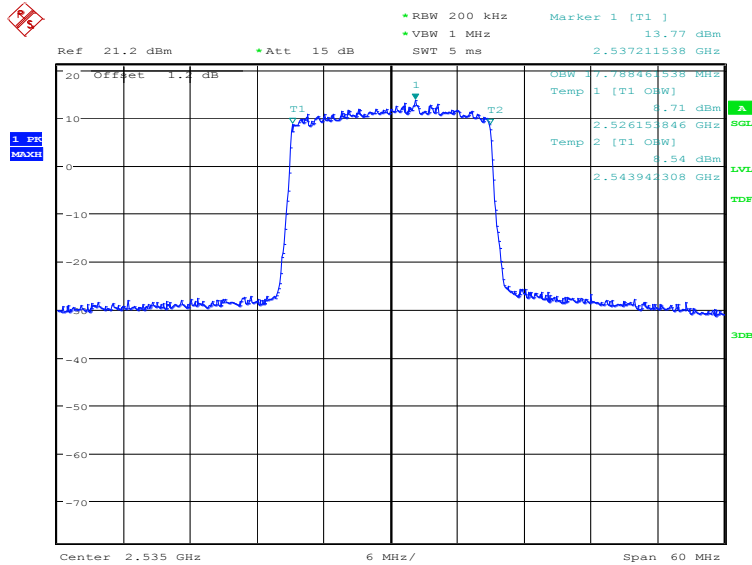
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
2535.0	QPSK	16QAM
	17788.46	17788.46

LTE band 7, 20MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:40:16

LTE band 7, 20MHz Bandwidth, 16QAM (99% BW)

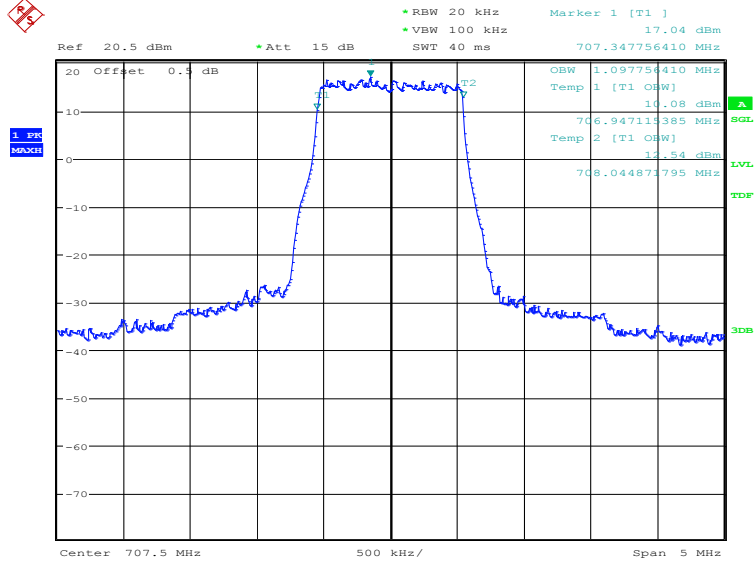


Date: 2.APR.2020 17:41:41

LTE band 12, 1.4MHz (99%)

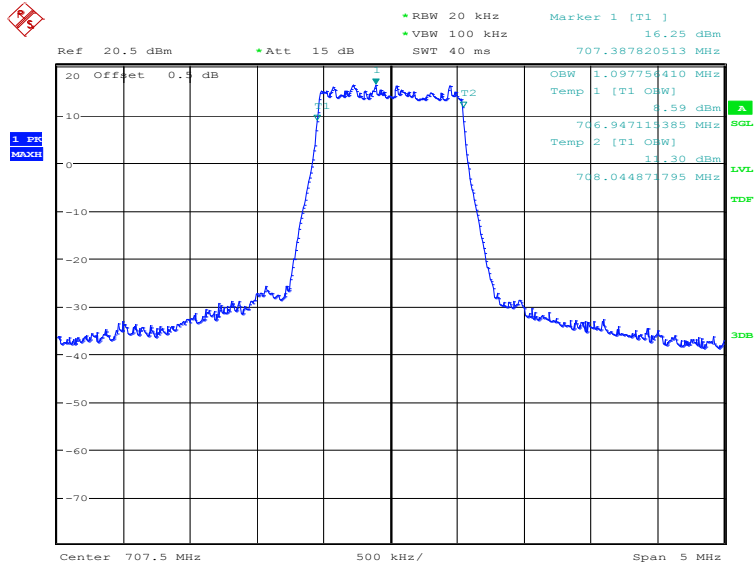
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
707.5	QPSK	16QAM
	1097.76	1097.76

LTE band 12, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:44:05

LTE band 12, 1.4MHz Bandwidth, 16QAM (99% BW)

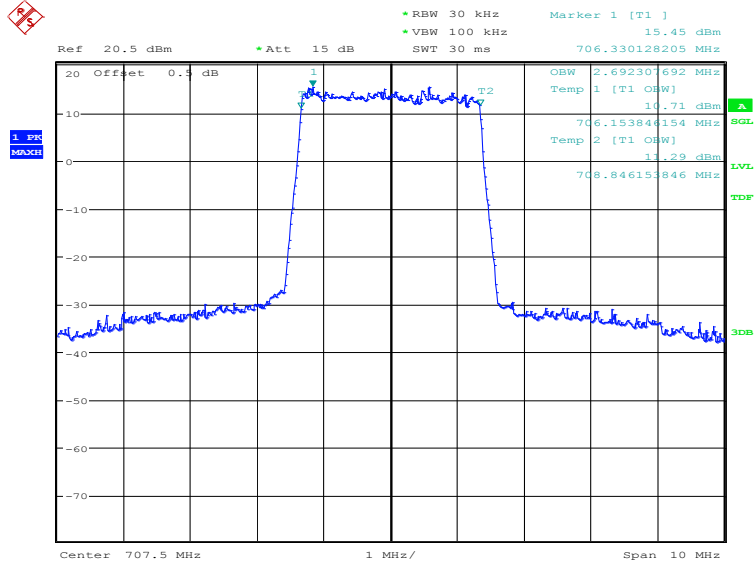


Date: 2.APR.2020 17:45:30

LTE band 12, 3MHz (99%)

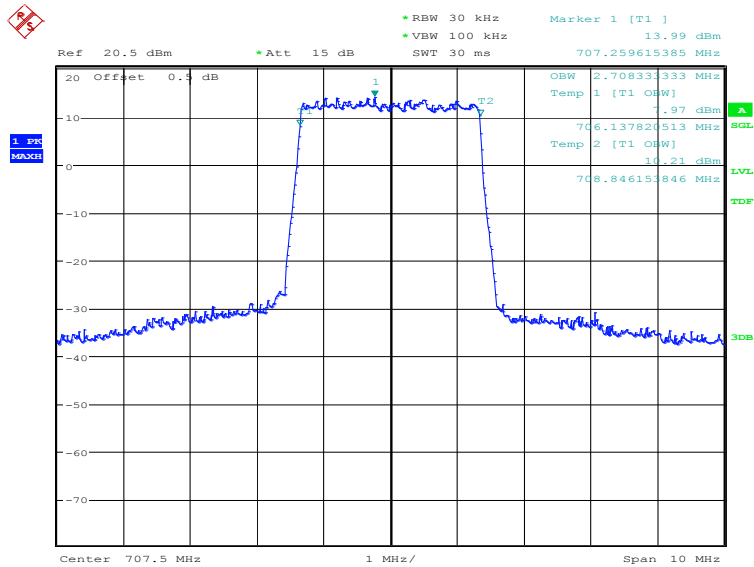
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
707.5	QPSK	16QAM
	2692.31	2708.33

LTE band 12, 3MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:46:55

LTE band 12, 3MHz Bandwidth, 16QAM (99% BW)

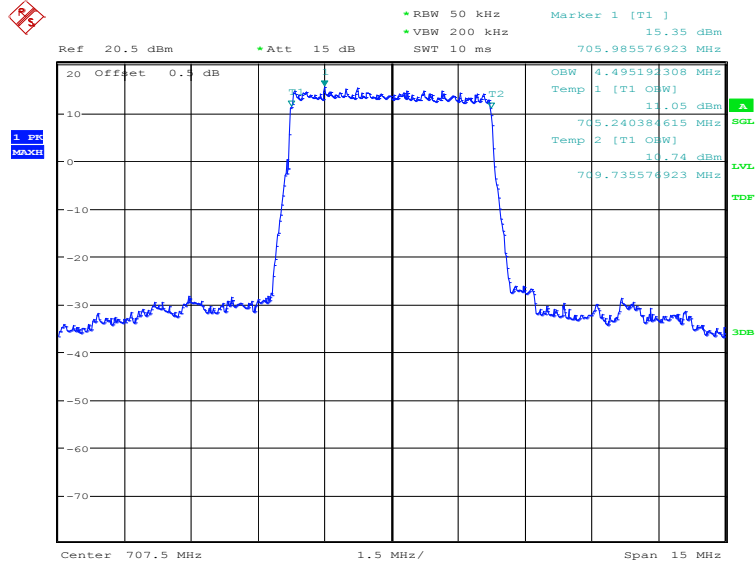


Date: 2.APR.2020 17:48:19

LTE band 12, 5MHz (99%)

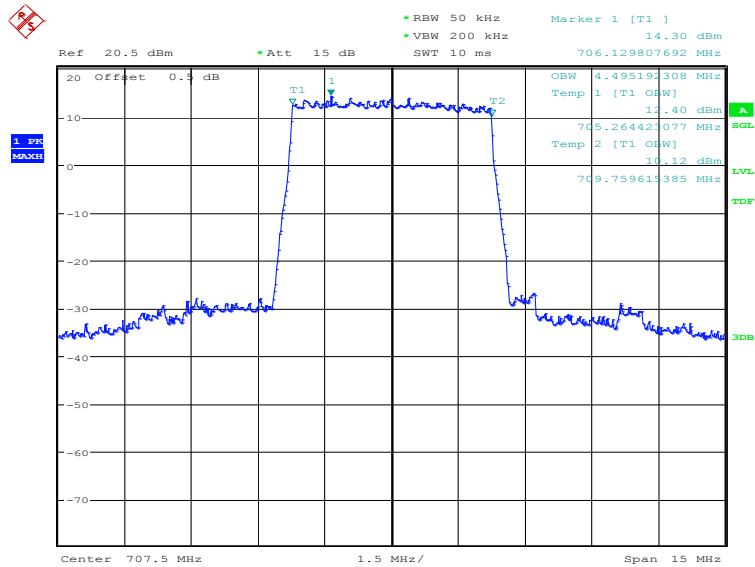
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
707.5	QPSK	16QAM
	4495.19	4495.19

LTE band 12, 5MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:49:45

LTE band 12, 5MHz Bandwidth, 16QAM (99% BW)

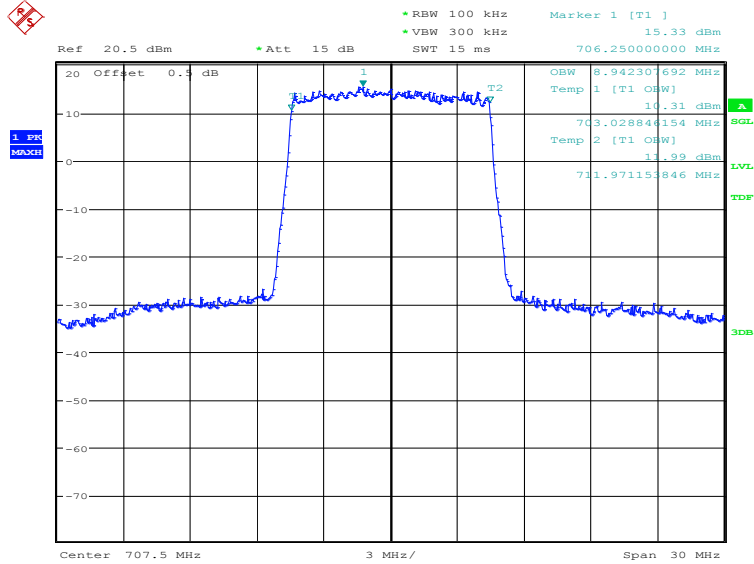


Date: 2.APR.2020 17:51:09

LTE band 12, 10MHz (99%)

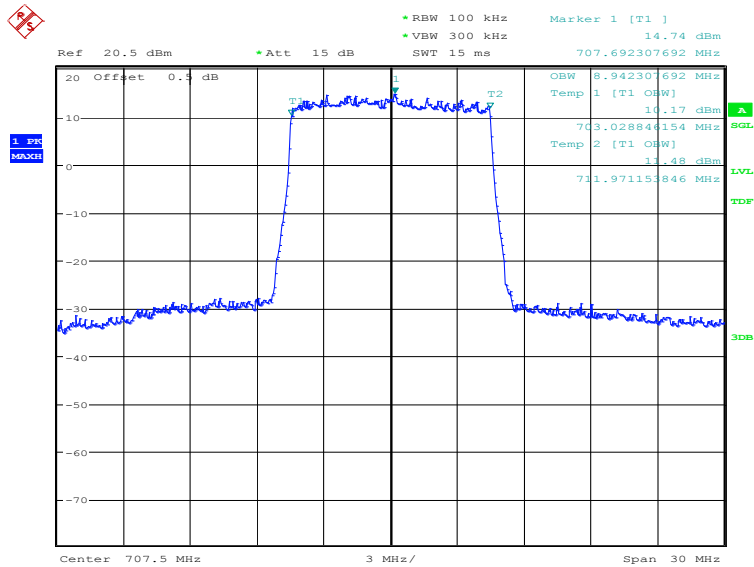
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
707.5	QPSK	16QAM
	8942.31	8942.31

LTE band 12, 10MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:52:35

LTE band 12, 10MHz Bandwidth, 16QAM (99% BW)

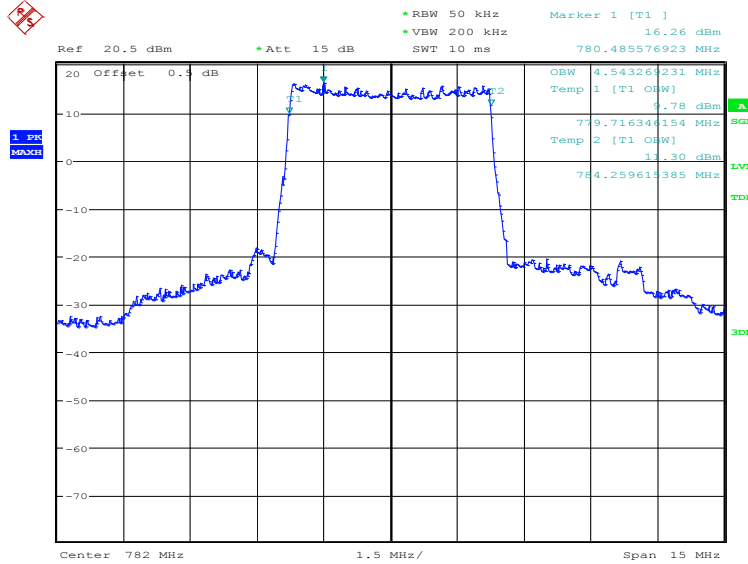


Date: 2.APR.2020 17:53:59

LTE band 13, 5MHz (99%)

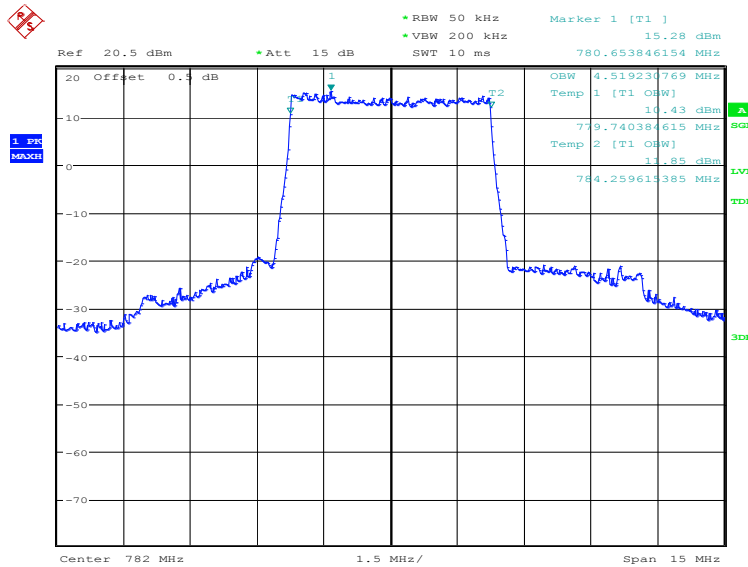
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
782.0	QPSK	16QAM
	4543.27	4519.23

LTE band 13, 5MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:55:26

LTE band 13, 5MHz Bandwidth, 16QAM (99% BW)

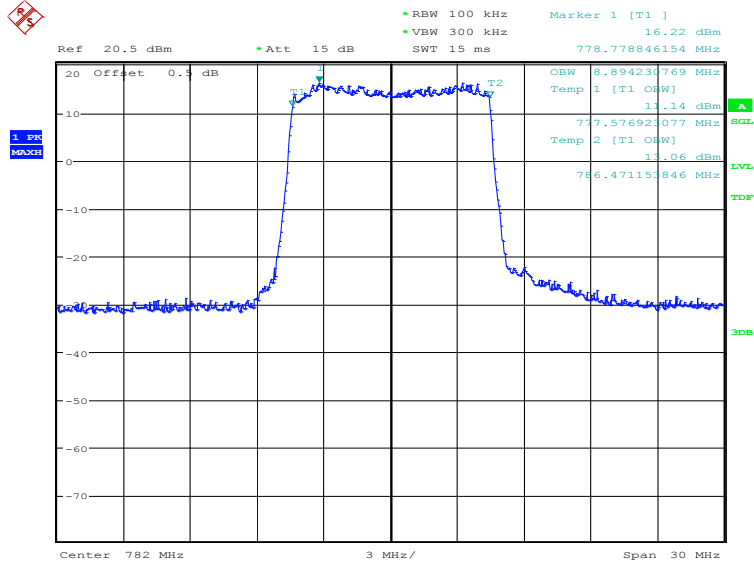


Date: 2.APR.2020 17:56:50

LTE band 13, 10MHz (99%)

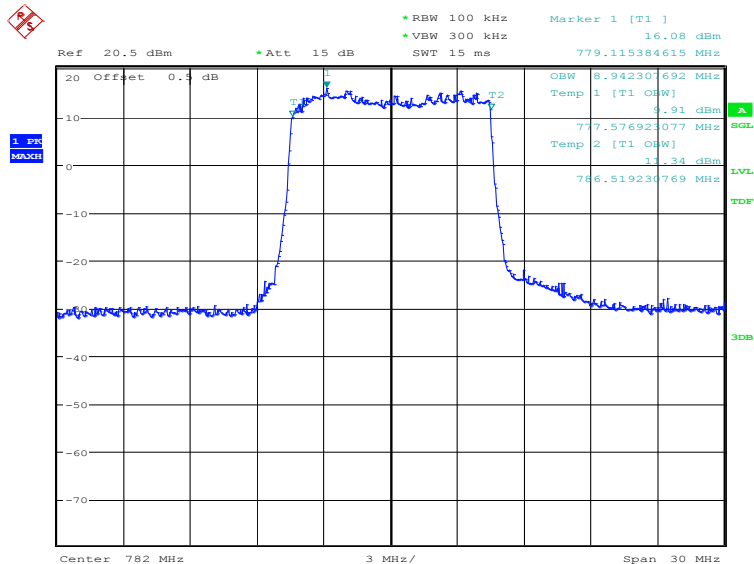
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
782.0	QPSK	16QAM
	8894.23	8942.31

LTE band 13, 10MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 17:58:16

LTE band 13, 10MHz Bandwidth, 16QAM (99% BW)

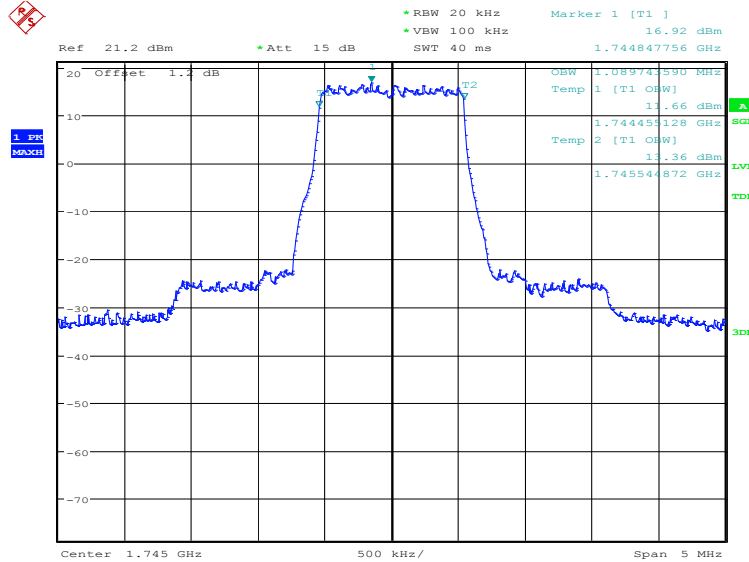


Date: 2.APR.2020 17:59:40

LTE band 66, 1.4MHz (99%)

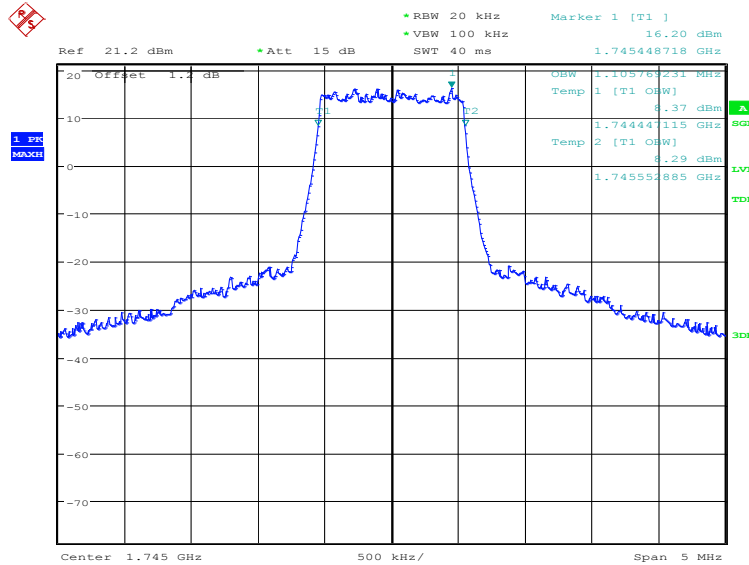
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1745.0	QPSK	16QAM
	1089.74	1105.77

LTE band 66, 1.4MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 18:01:10

LTE band 66, 1.4MHz Bandwidth, 16QAM (99% BW)

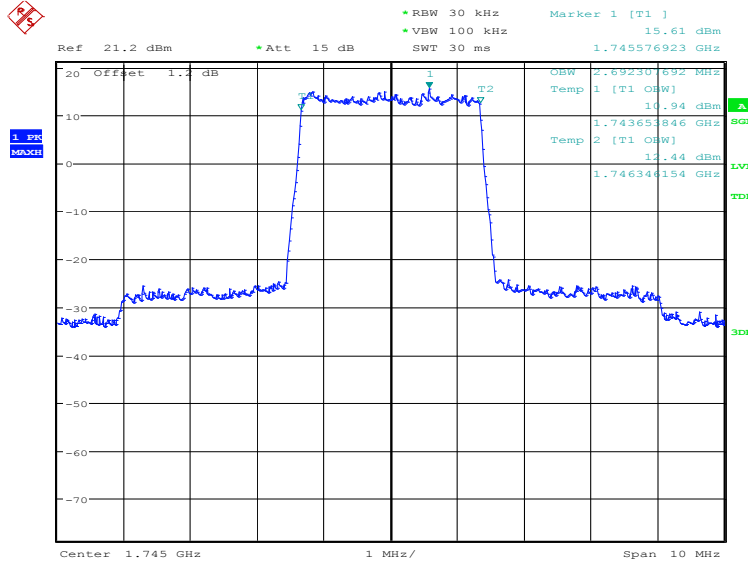


Date: 2.APR.2020 18:02:34

LTE band 66, 3MHz (99%)

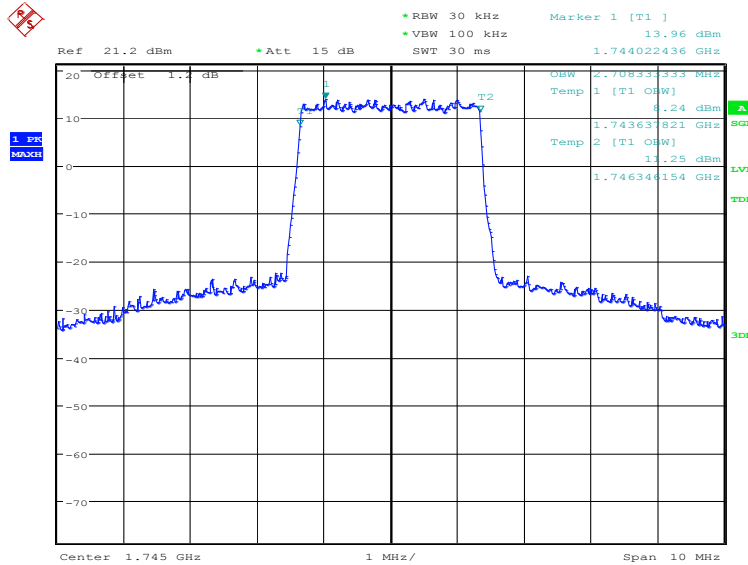
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1745.0	QPSK	16QAM
	2692.31	2708.33

LTE band 66, 3MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 18:04:00

LTE band 66, 3MHz Bandwidth, 16QAM (99% BW)

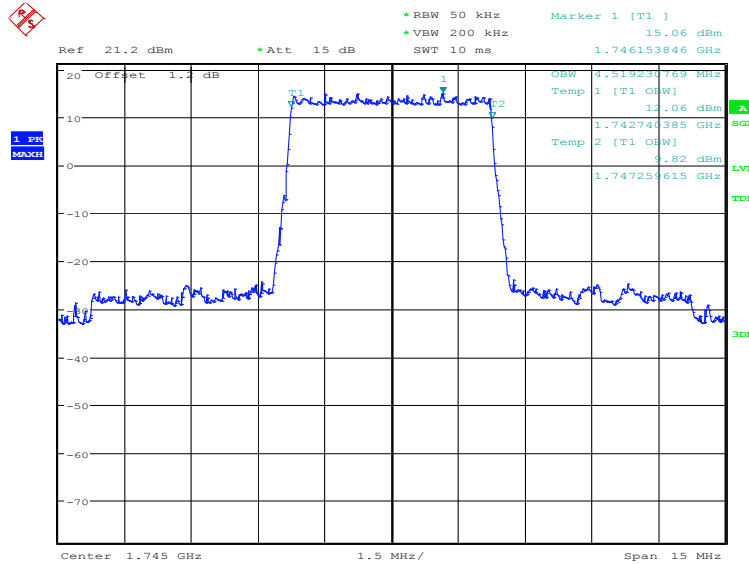


Date: 2.APR.2020 18:05:24

LTE band 66, 5MHz (99%)

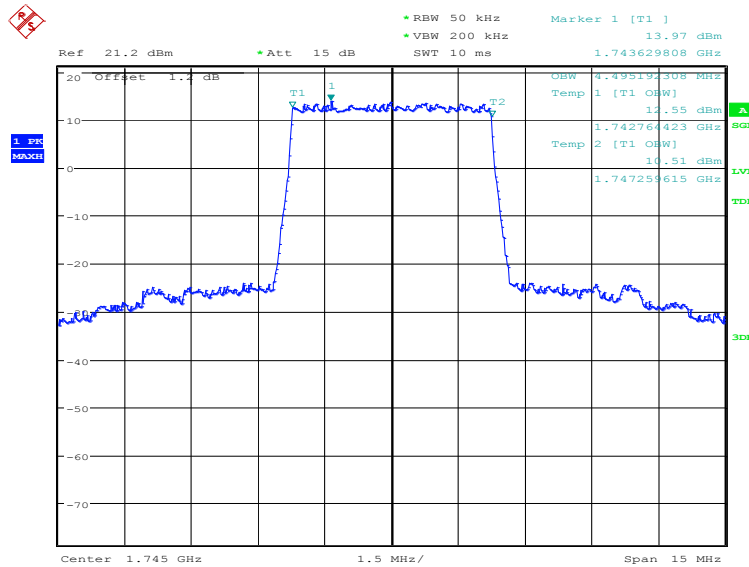
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1745.0	QPSK	16QAM
	4519.23	4495.19

LTE band 66, 5MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 18:06:50

LTE band 66, 5MHz Bandwidth, 16QAM (99% BW)

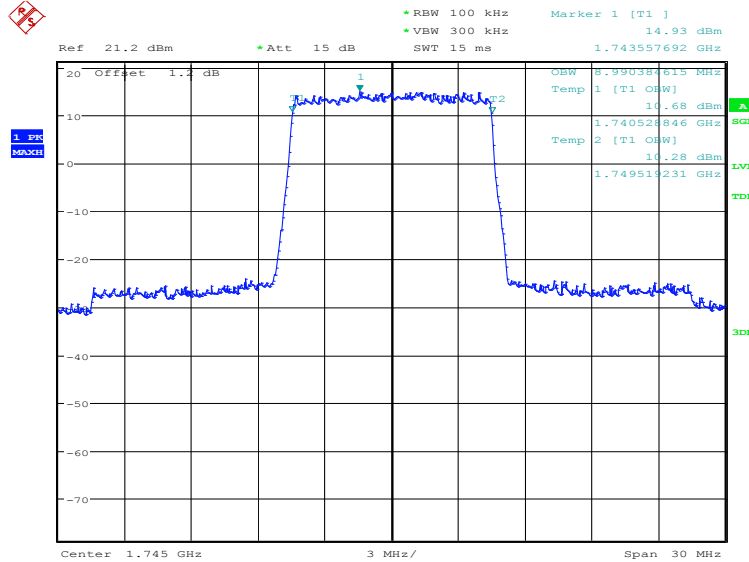


Date: 2.APR.2020 18:08:14

LTE band 66, 10MHz (99%)

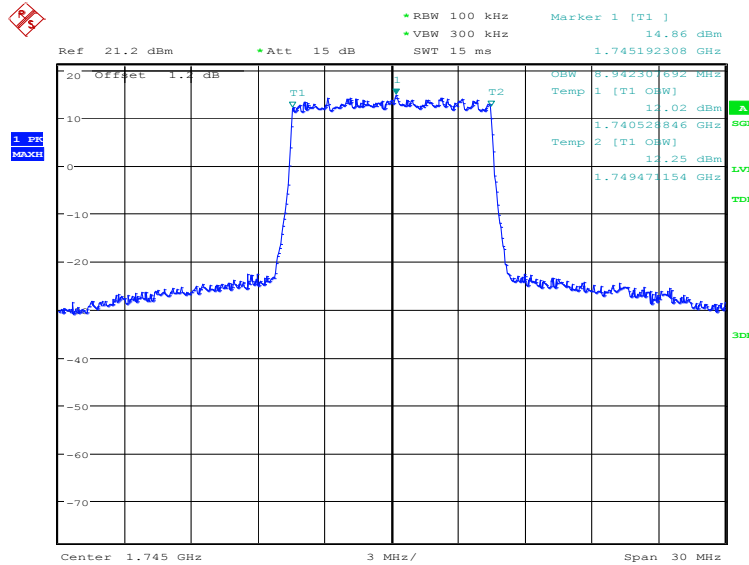
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1745.0	QPSK	16QAM
	8990.38	8942.31

LTE band 66, 10MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 18:09:40

LTE band 66, 10MHz Bandwidth, 16QAM (99% BW)

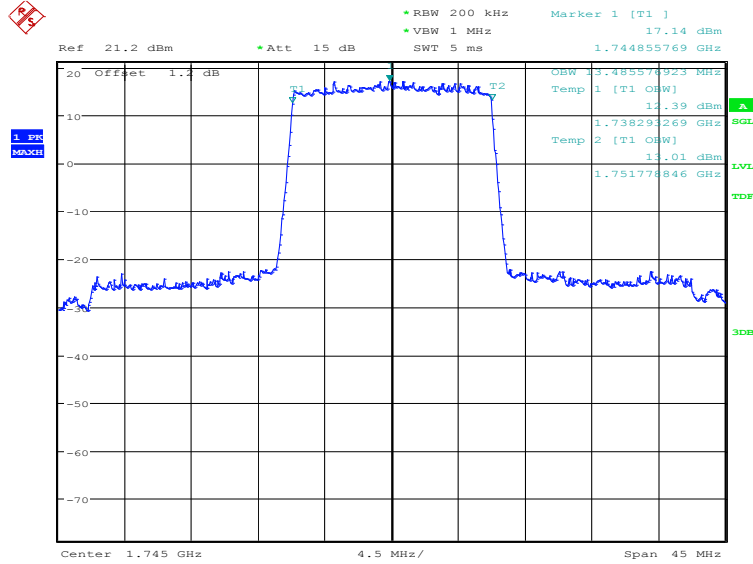


Date: 2.APR.2020 18:11:04

LTE band 66, 15MHz (99%)

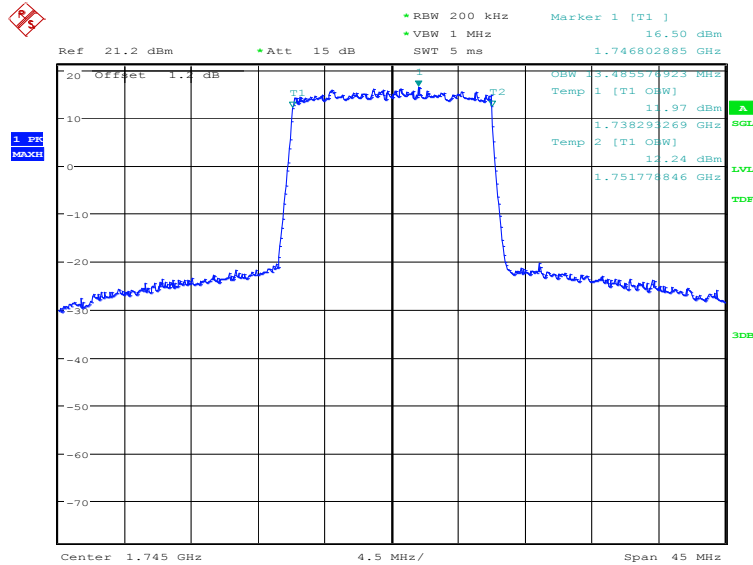
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
	1745.0	QPSK
13485.58		13485.58

LTE band 66, 15MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 18:12:30

LTE band 66, 15MHz Bandwidth, 16QAM (99% BW)

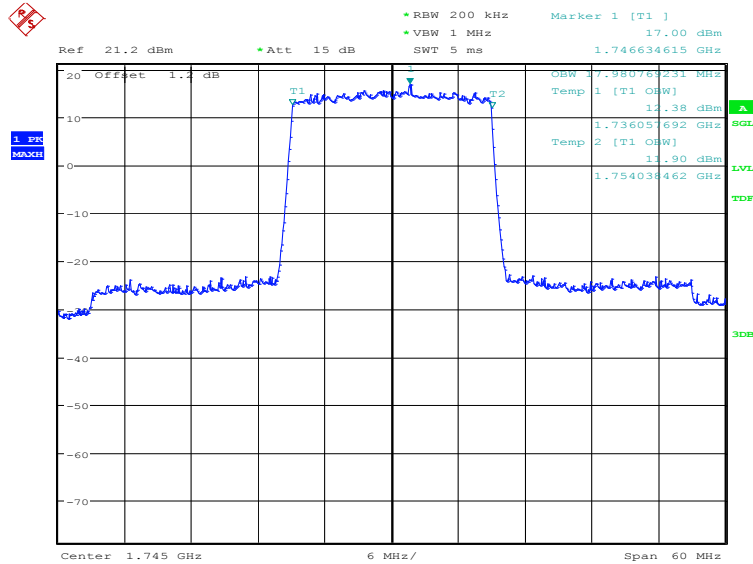


Date: 2.APR.2020 18:13:55

LTE band 66, 20MHz (99%)

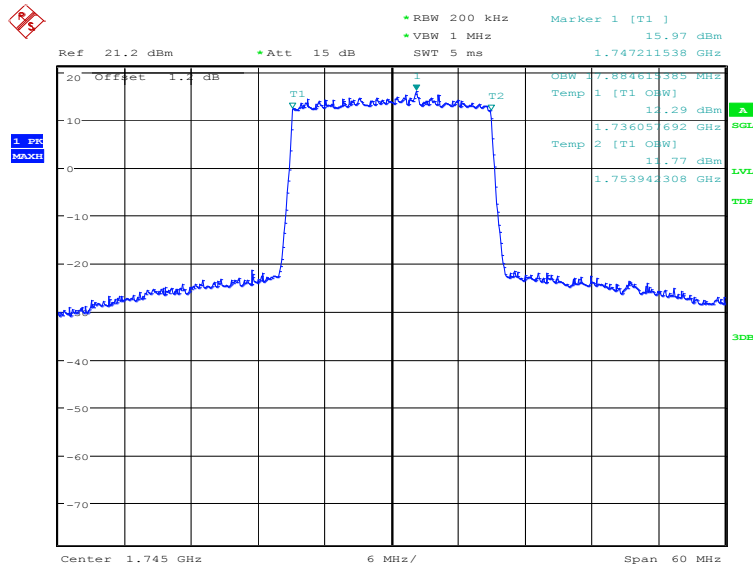
Frequency(MHz)	Occupied Bandwidth (99%) (kHz)	
1745.0	QPSK	16QAM
	17980.77	17884.62

LTE band 66, 20MHz Bandwidth, QPSK (99% BW)



Date: 2.APR.2020 18:15:20

LTE band 66, 20MHz Bandwidth, 16QAM (99% BW)



Date: 2.APR.2020 18:16:45

A.5 EMISSION BANDWIDTH

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Table below lists the measured -26dBc BW. Spectrum analyzer plots are included on the following pages.

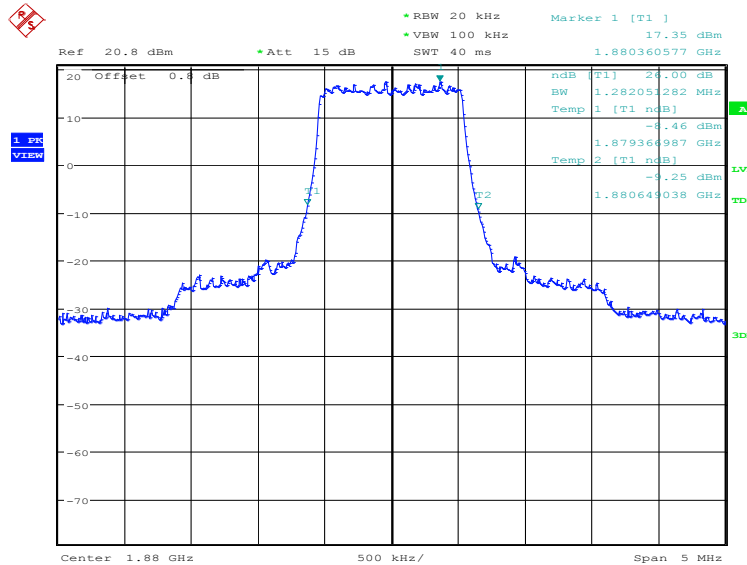
The measurement method is from ANSI C63.26:

- The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW.
- Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation.
- The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- Set spectrum analyzer detection mode to peak, and the trace mode to max hold.

LTE band 2, 1.4MHz (-26dBc)

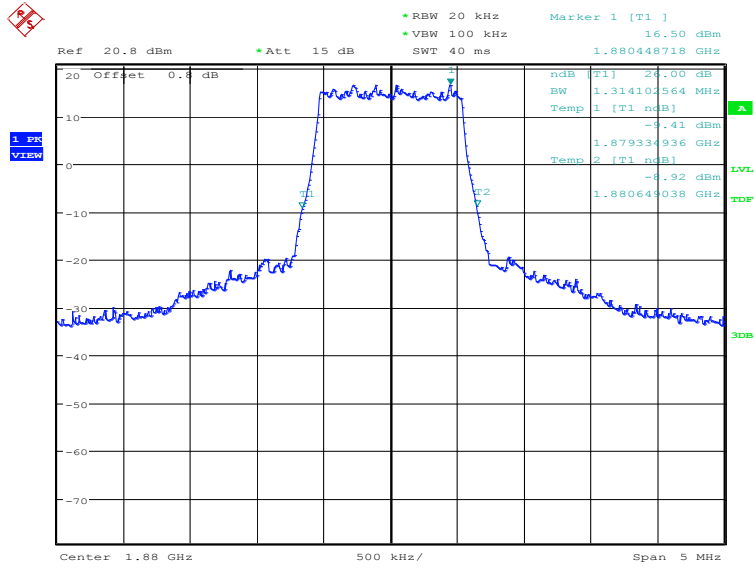
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
	1880.0	QPSK
	1282.05	1314.10

LTE band 2, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:18:45

LTE band 2, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

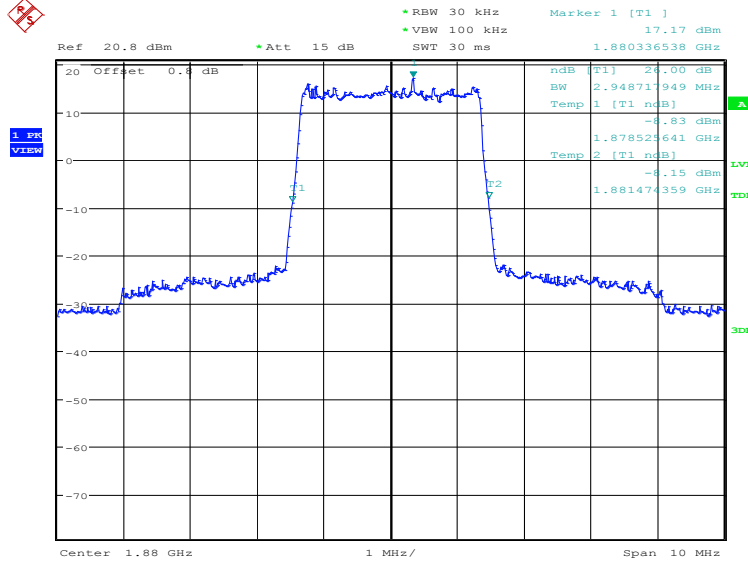


Date: 2.APR.2020 18:20:09

LTE band 2, 3MHz (-26dBc)

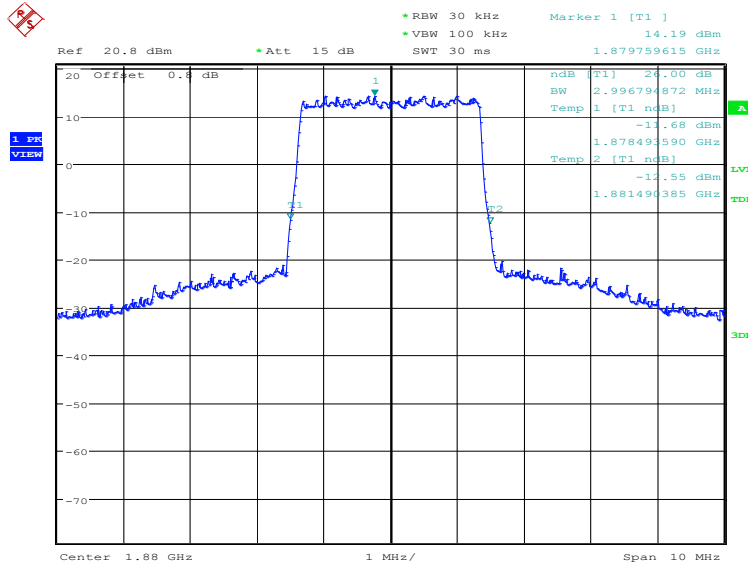
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
1880.0	QPSK	16QAM
	2948.72	2996.79

LTE band 2, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:21:35

LTE band 2, 3MHz Bandwidth, 16QAM (-26dBc BW)

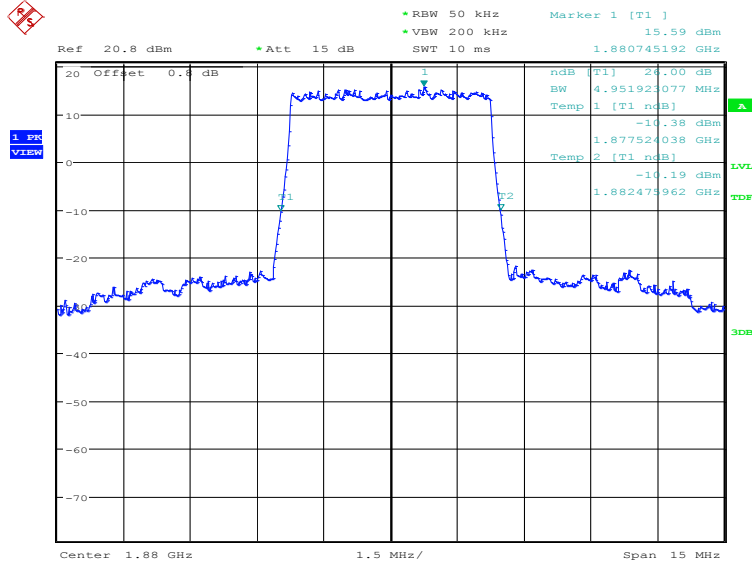


Date: 2.APR.2020 18:23:00

LTE band 2, 5MHz (-26dBc)

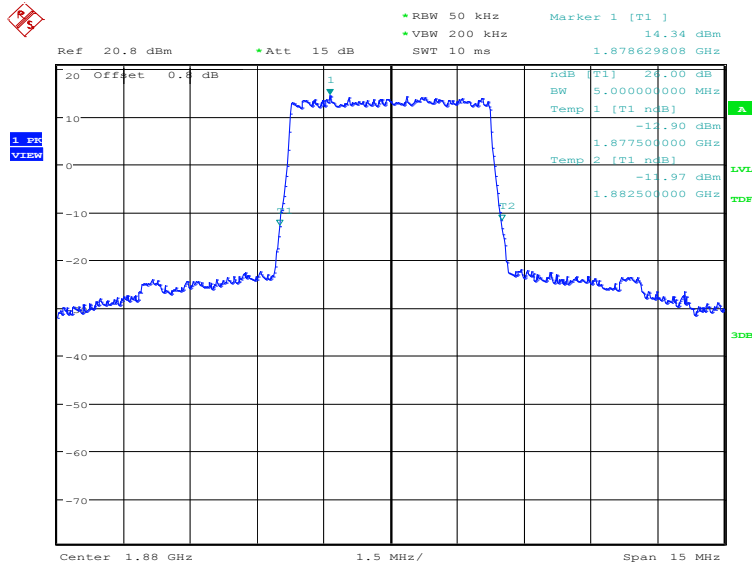
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
1880.0	QPSK	16QAM
	4951.92	5000.00

LTE band 2, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:24:26

LTE band 2, 5MHz Bandwidth, 16QAM (-26dBc BW)

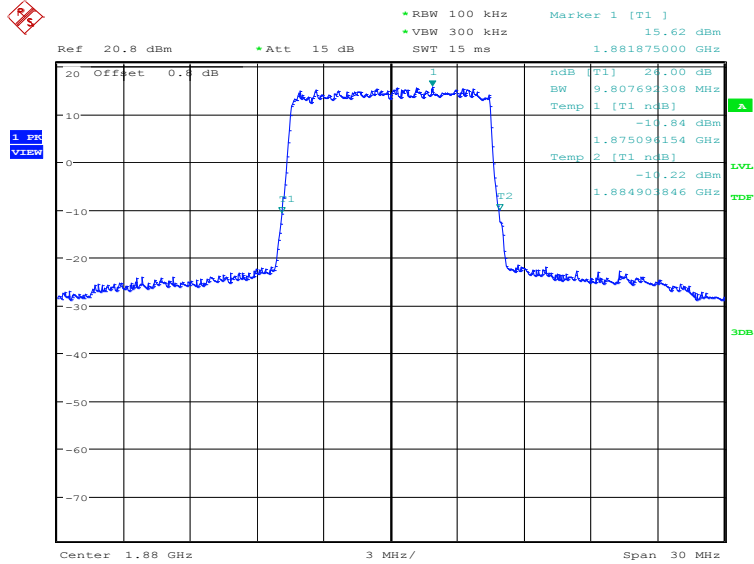


Date: 2.APR.2020 18:25:50

LTE band 2, 10MHz (-26dBc)

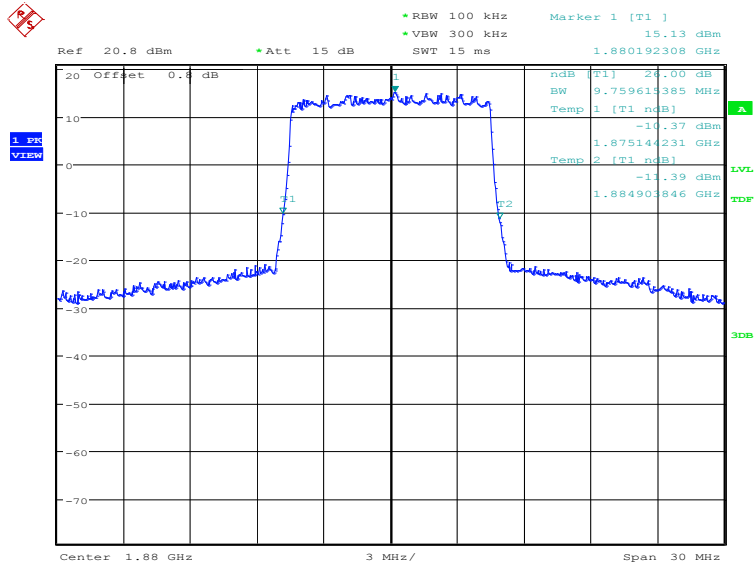
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
1880.0	QPSK	16QAM
	9807.69	9759.62

LTE band 2, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:27:16

LTE band 2, 10MHz Bandwidth, 16QAM (-26dBc BW)

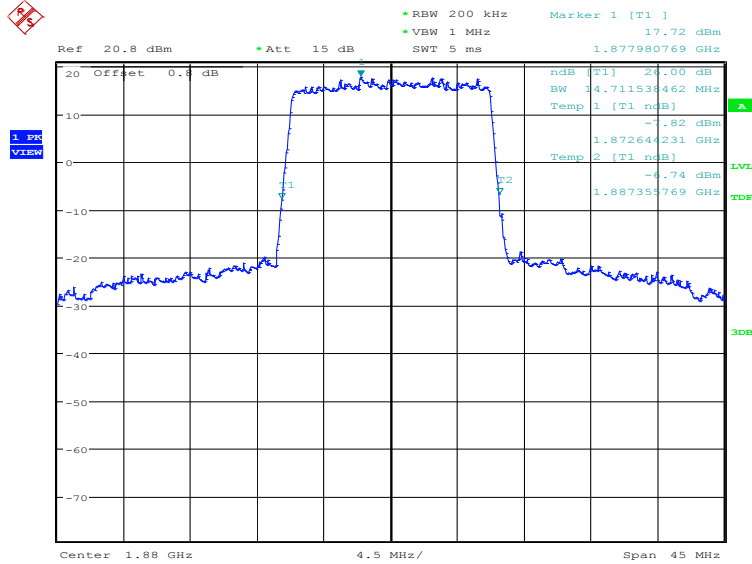


Date: 2.APR.2020 18:28:41

LTE band 2, 15MHz (-26dBc)

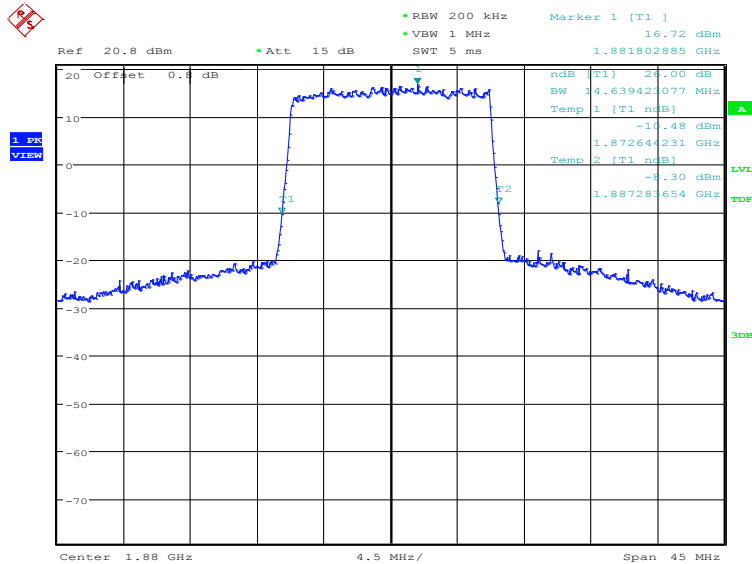
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
1880.0	QPSK	16QAM
	14711.54	14639.42

LTE band 2, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:30:07

LTE band 2, 15MHz Bandwidth, 16QAM (-26dBc BW)

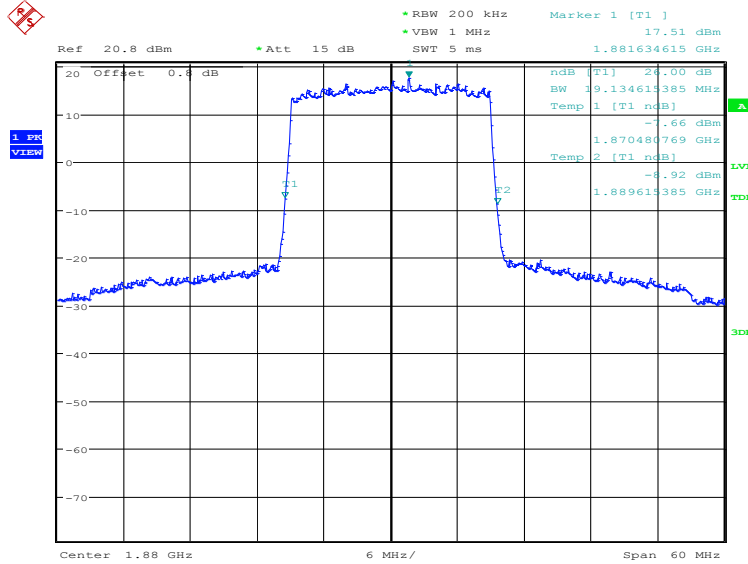


Date: 2.APR.2020 18:31:32

LTE band 2, 20MHz (-26dBc)

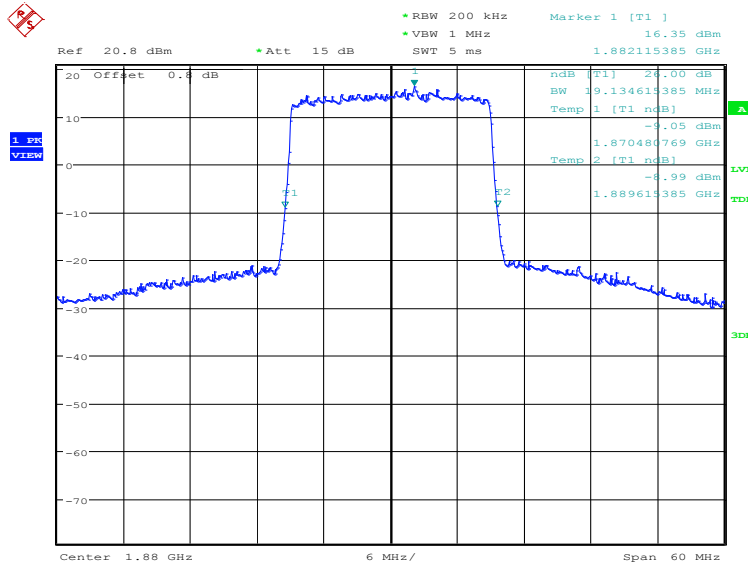
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
1880.0	QPSK	16QAM
	19134.62	19134.62

LTE band 2, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:32:58

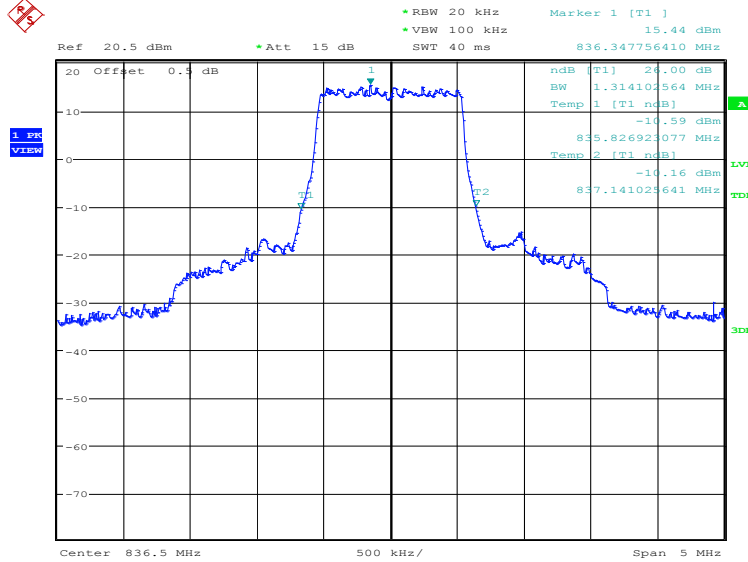
LTE band 2, 20MHz Bandwidth, 16QAM (-26dBc BW)



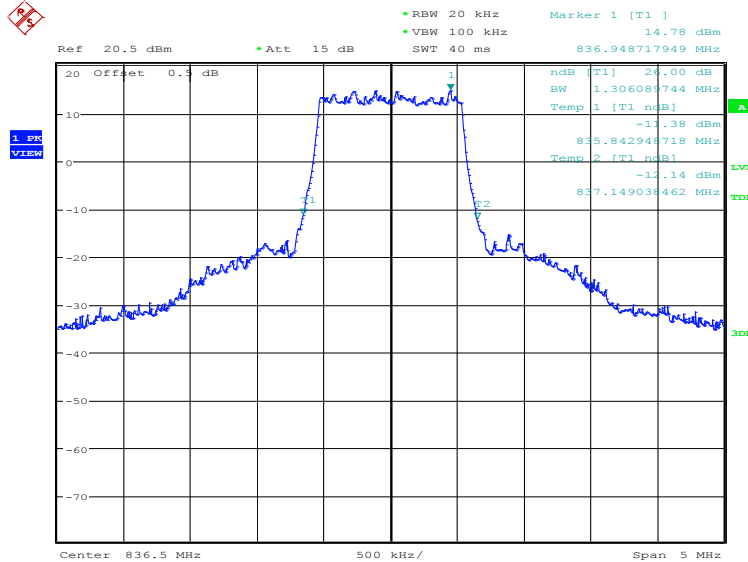
Date: 2.APR.2020 18:34:22

LTE band 5, 1.4MHz (-26dBc)

Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
836.5	QPSK	16QAM
	1314.10	1306.09

LTE band 5, 1.4MHz Bandwidth, QPSK (-26dBc BW)


Date: 2.APR.2020 18:36:39

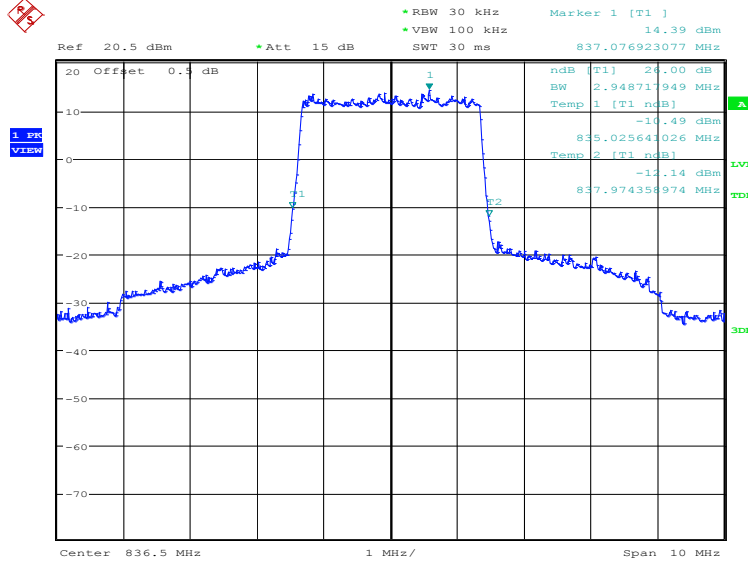
LTE band 5, 1.4MHz Bandwidth, 16QAM (-26dBc BW)


Date: 2.APR.2020 18:38:04

LTE band 5, 3MHz (-26dBc)

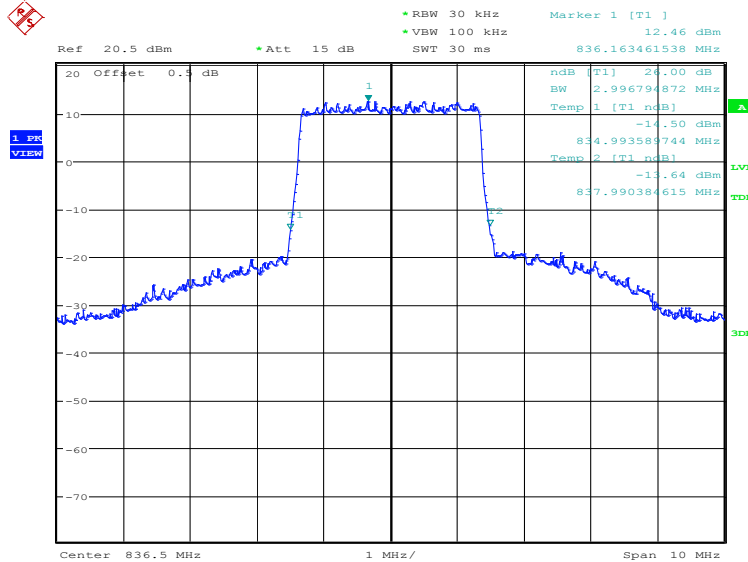
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
836.5	QPSK	16QAM
	2948.72	2996.79

LTE band 5, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:39:30

LTE band 5, 3MHz Bandwidth, 16QAM (-26dBc BW)

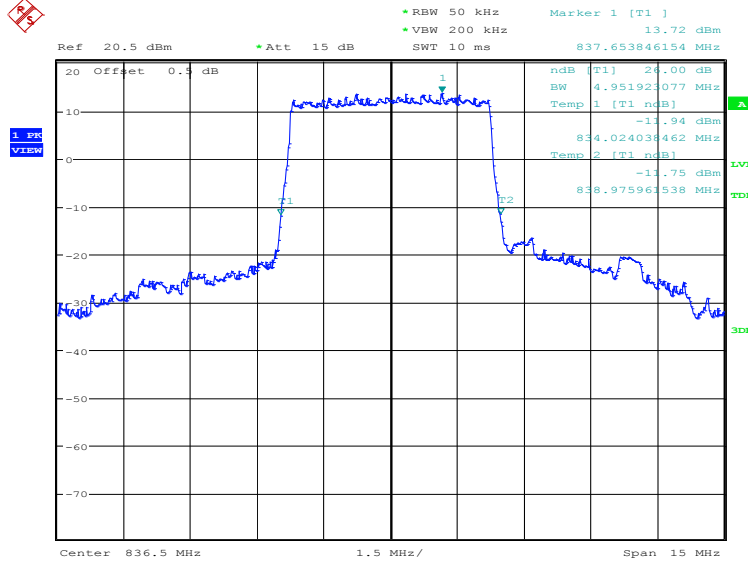


Date: 2.APR.2020 18:40:54

LTE band 5, 5MHz (-26dBc)

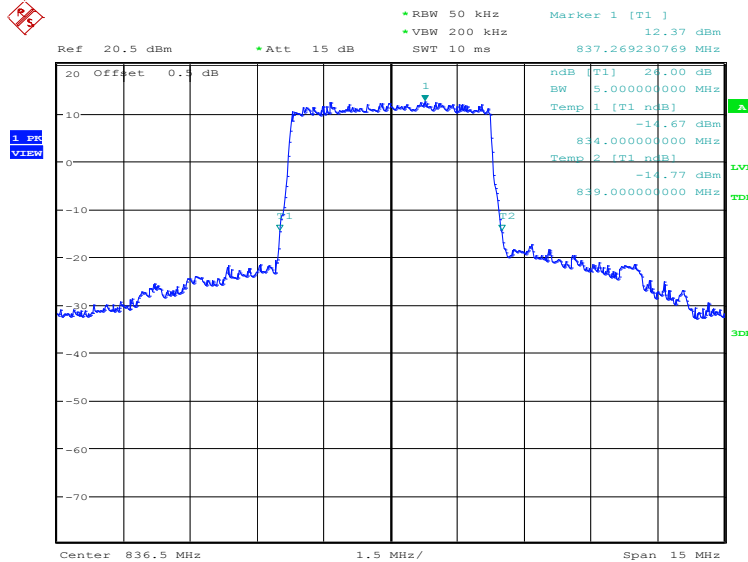
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
836.5	QPSK	16QAM
	4951.92	5000.00

LTE band 5, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:42:20

LTE band 5, 5MHz Bandwidth, 16QAM (-26dBc BW)

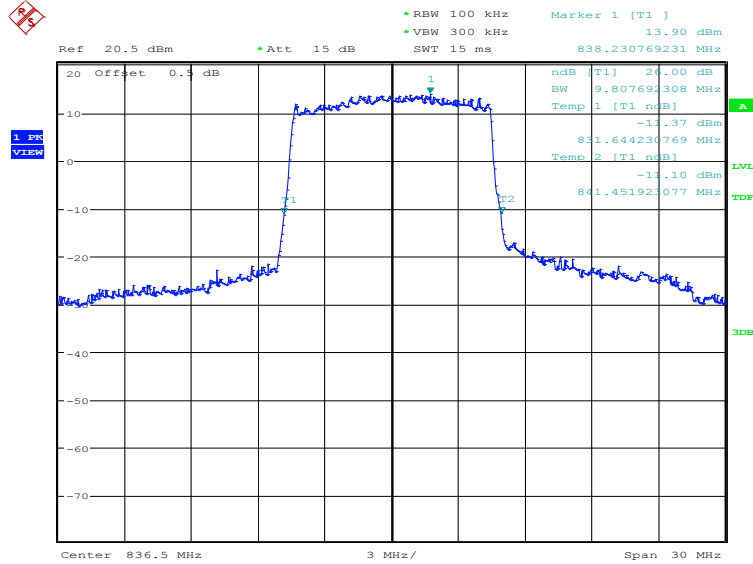


Date: 2.APR.2020 18:43:45

LTE band 5, 10MHz (-26dBc)

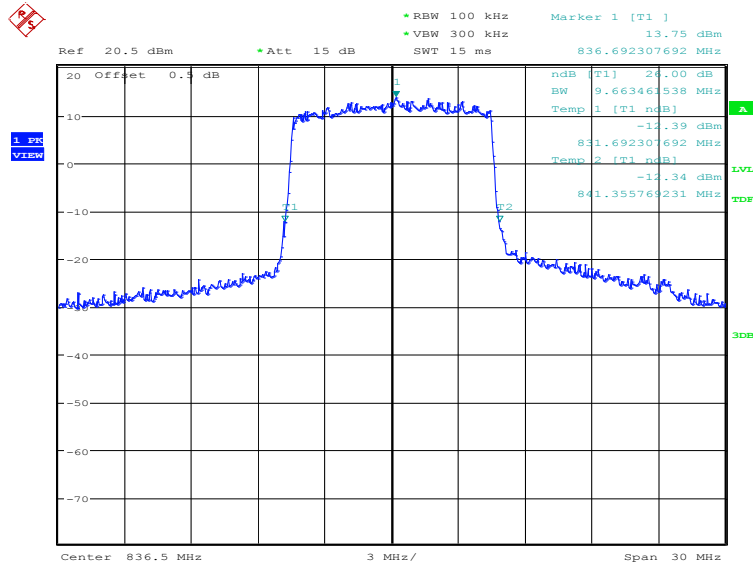
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
836.5	QPSK	16QAM
	9807.69	9663.46

LTE band 5, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:45:11

LTE band 5, 10MHz Bandwidth, 16QAM (-26dBc BW)

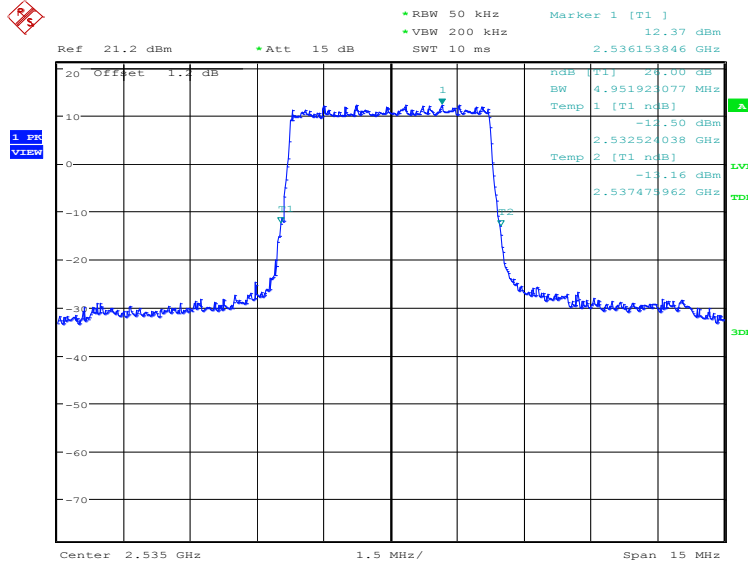


Date: 2.APR.2020 18:46:35

LTE band 7, 5MHz (-26dBc)

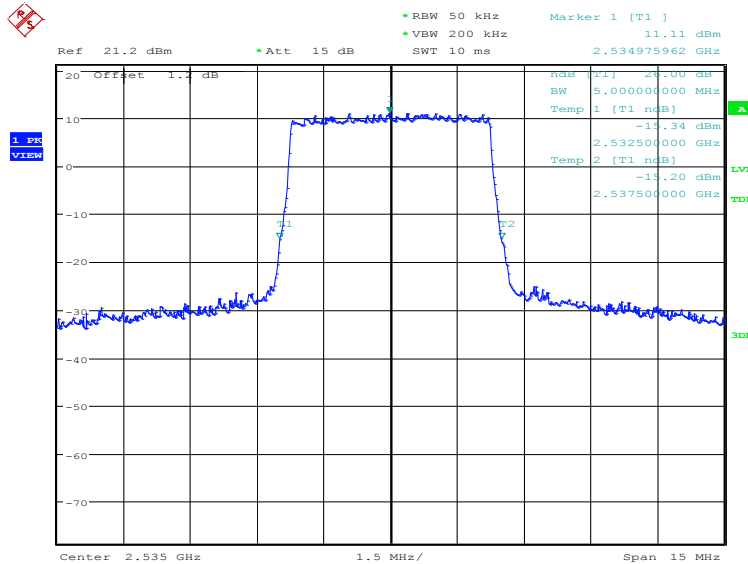
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
2535.0	QPSK	16QAM
	4951.92	5000.00

LTE band 7, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:48:02

LTE band 7, 5MHz Bandwidth, 16QAM (-26dBc BW)

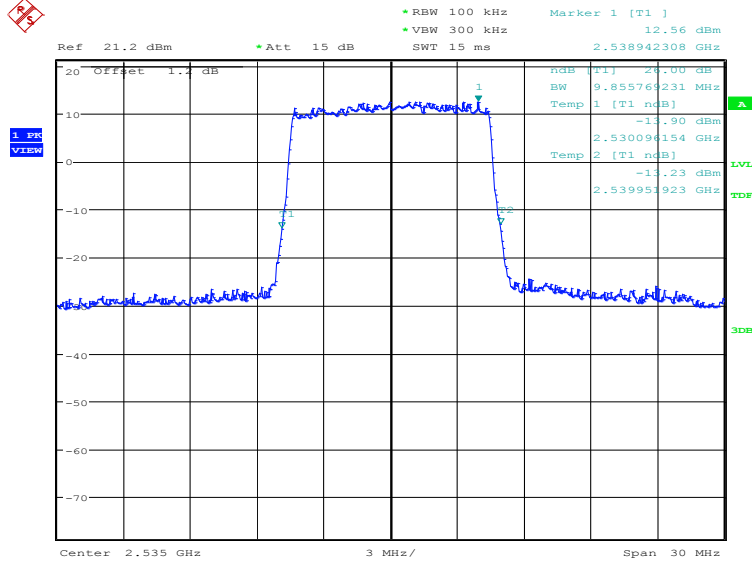


Date: 2.APR.2020 18:49:27

LTE band 7, 10MHz (-26dBc)

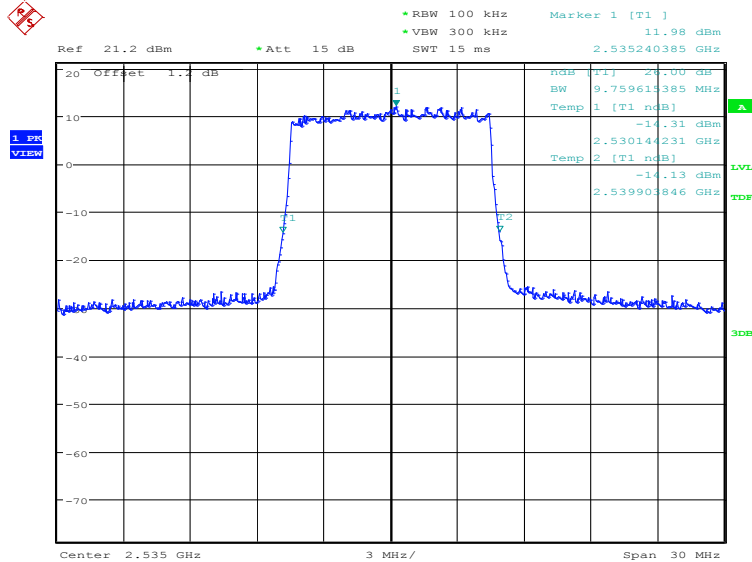
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
2535.0	QPSK	16QAM
	9855.77	9759.62

LTE band 7, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:50:53

LTE band 7, 10MHz Bandwidth, 16QAM (-26dBc BW)

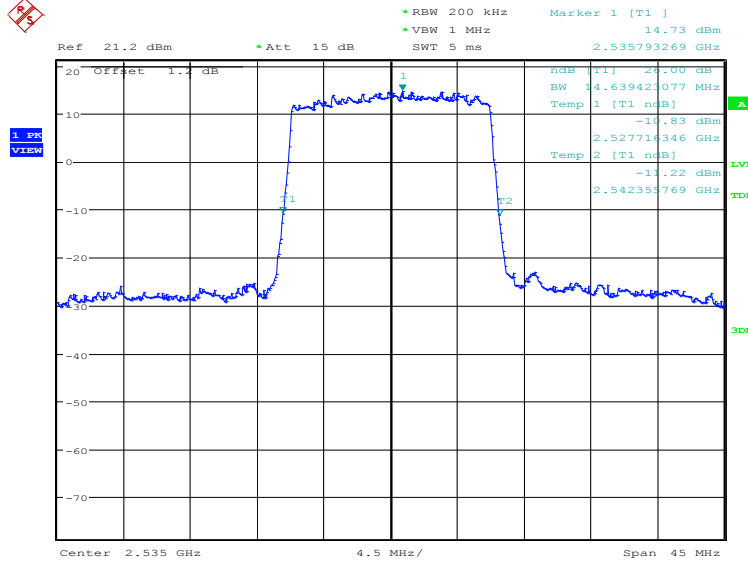


Date: 2.APR.2020 18:52:18

LTE band 7, 15MHz (-26dBc)

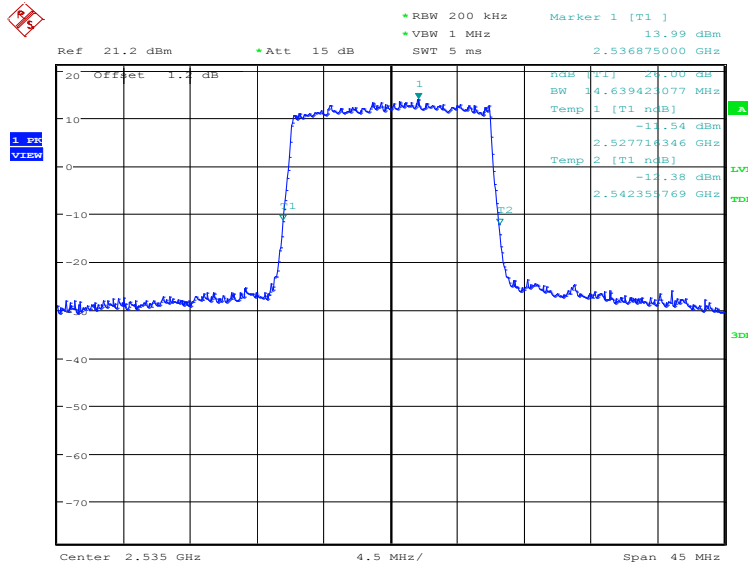
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
2535.0	QPSK	16QAM
	14639.42	14639.42

LTE band 7, 15MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:53:44

LTE band 7, 15MHz Bandwidth, 16QAM (-26dBc BW)

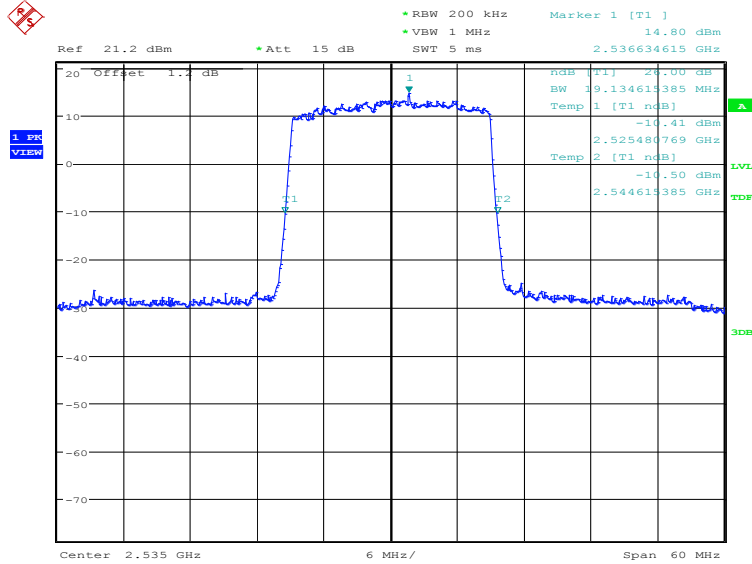


Date: 2.APR.2020 18:55:08

LTE band 7, 20MHz (-26dBc)

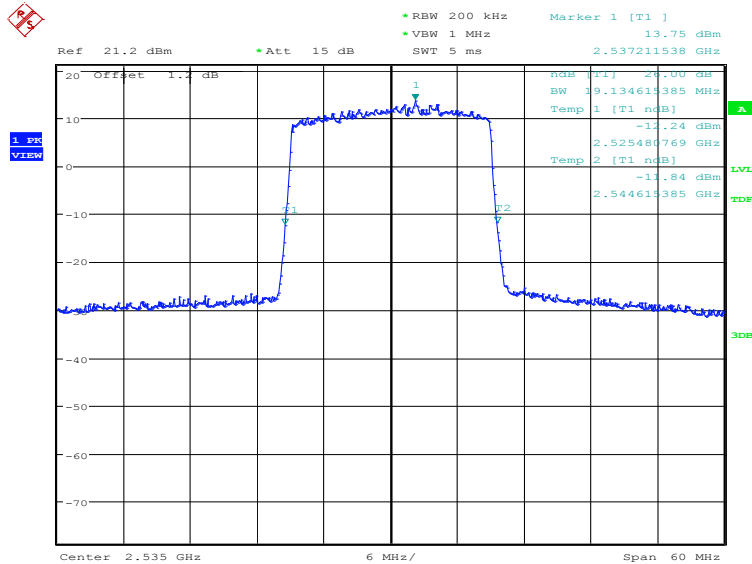
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
2535.0	QPSK	16QAM
	19134.62	19134.62

LTE band 7, 20MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 18:56:35

LTE band 7, 20MHz Bandwidth, 16QAM (-26dBc BW)

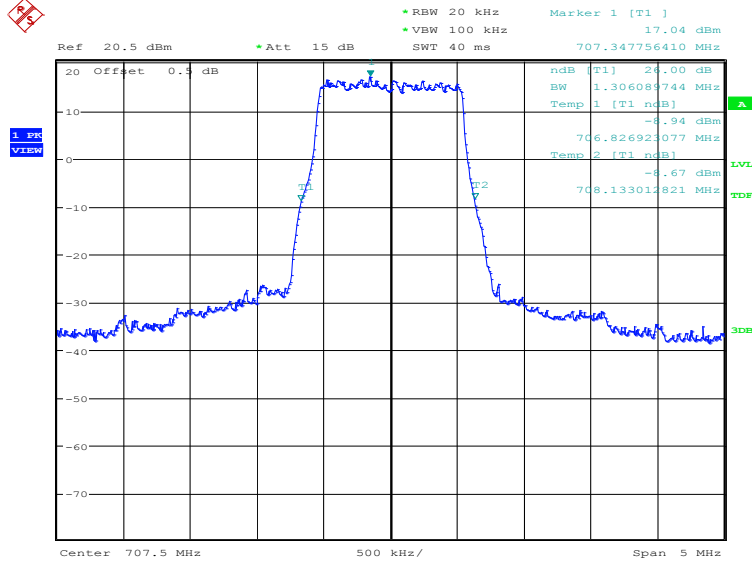


Date: 2.APR.2020 18:57:59

LTE band 12, 1.4MHz (-26dBc)

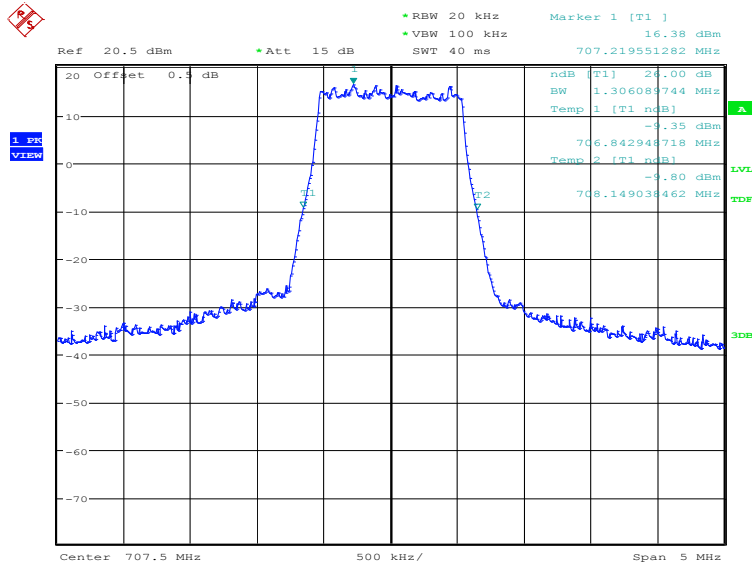
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
707.5	QPSK	16QAM
	1306.09	1306.09

LTE band 12, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:00:20

LTE band 12, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

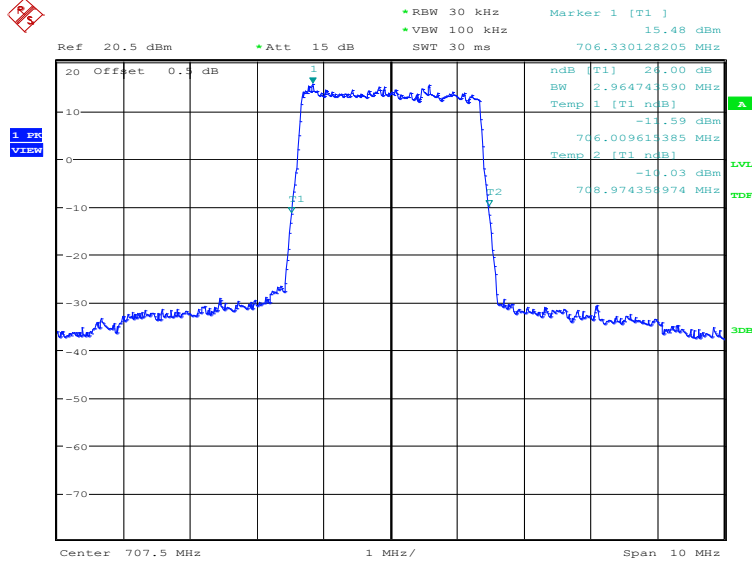


Date: 2.APR.2020 19:01:45

LTE band 12, 3MHz (-26dBc)

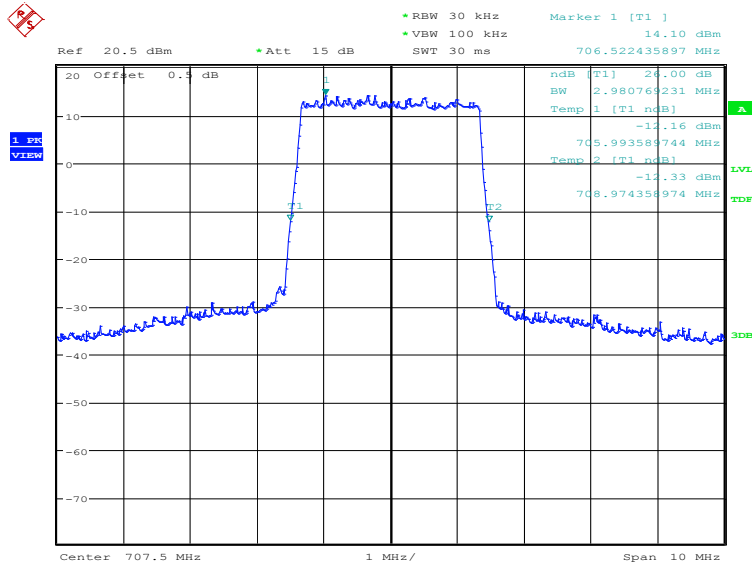
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
707.5	QPSK	16QAM
	2964.74	2980.77

LTE band 12, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:03:11

LTE band 12, 3MHz Bandwidth, 16QAM (-26dBc BW)

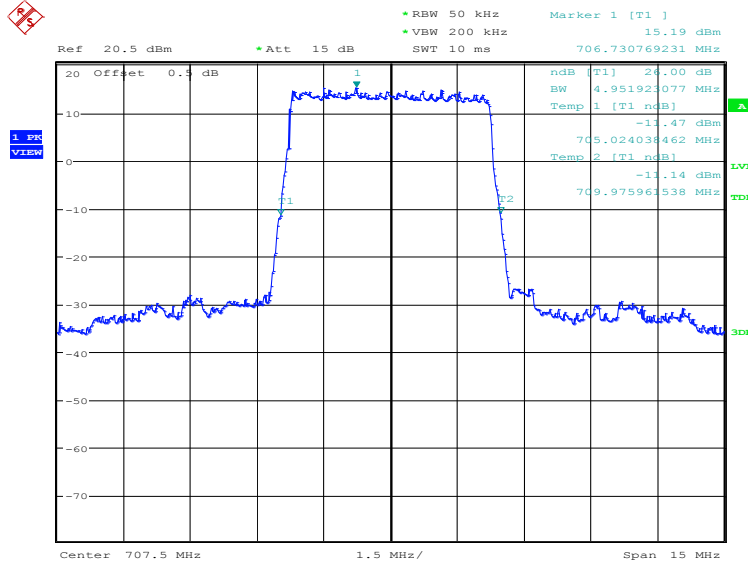


Date: 2.APR.2020 19:04:36

LTE band 12, 5MHz (-26dBc)

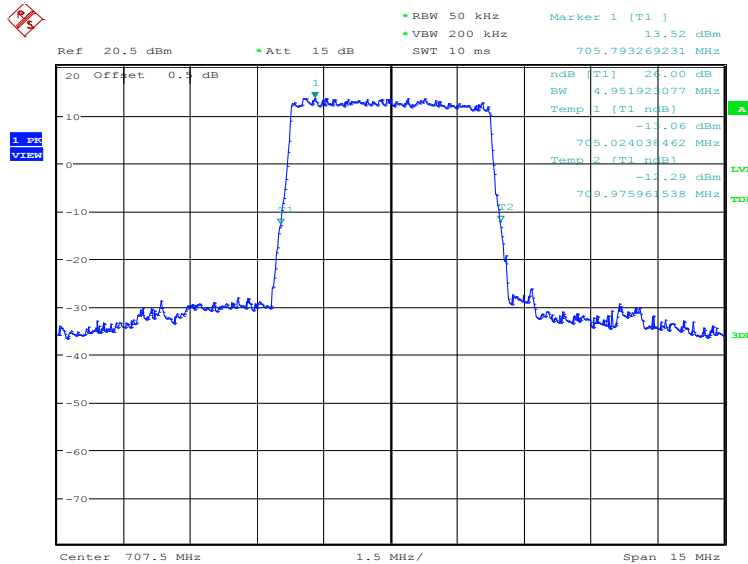
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
707.5	QPSK	16QAM
	4951.92	4951.92

LTE band 12, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:06:02

LTE band 12, 5MHz Bandwidth, 16QAM (-26dBc BW)

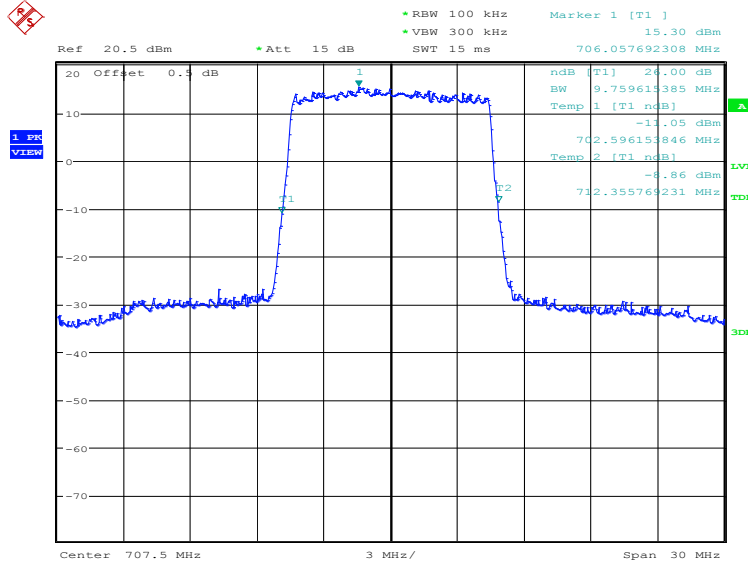


Date: 2.APR.2020 19:07:26

LTE band 12, 10MHz (-26dBc)

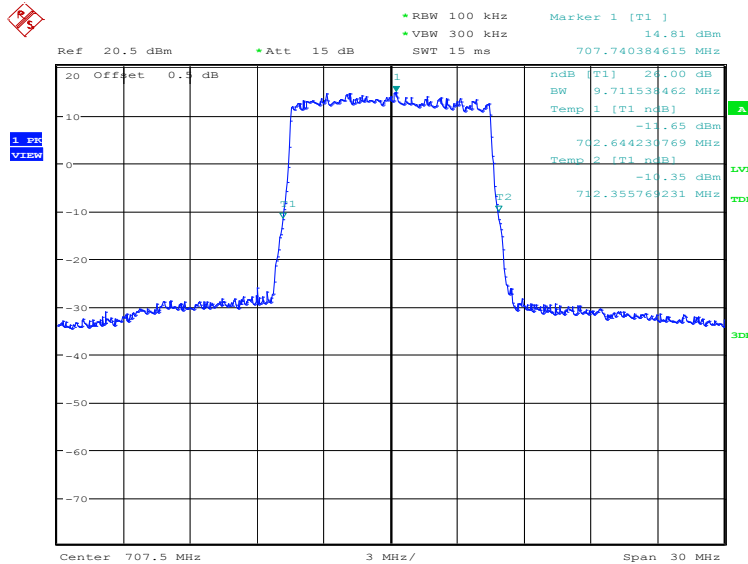
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
707.5	QPSK	16QAM
	9759.62	9711.54

LTE band 12, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:08:52

LTE band 12, 10MHz Bandwidth, 16QAM (-26dBc BW)

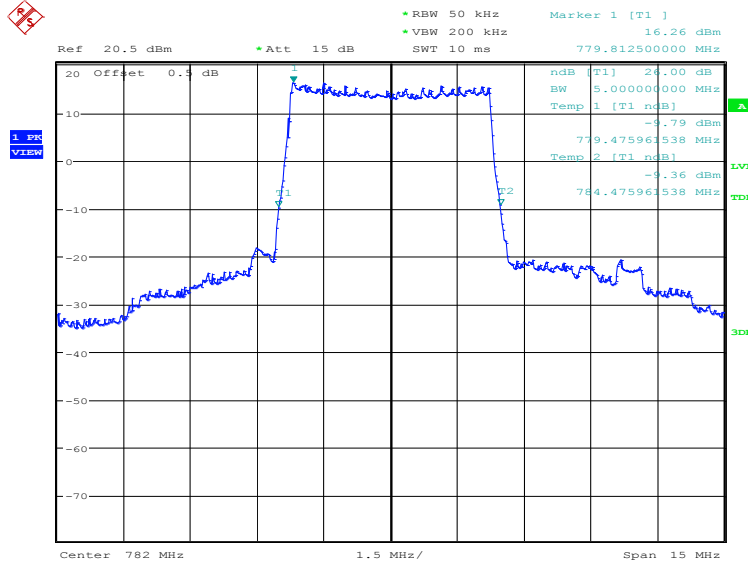


Date: 2.APR.2020 19:10:17

LTE band 13, 5MHz (-26dBc)

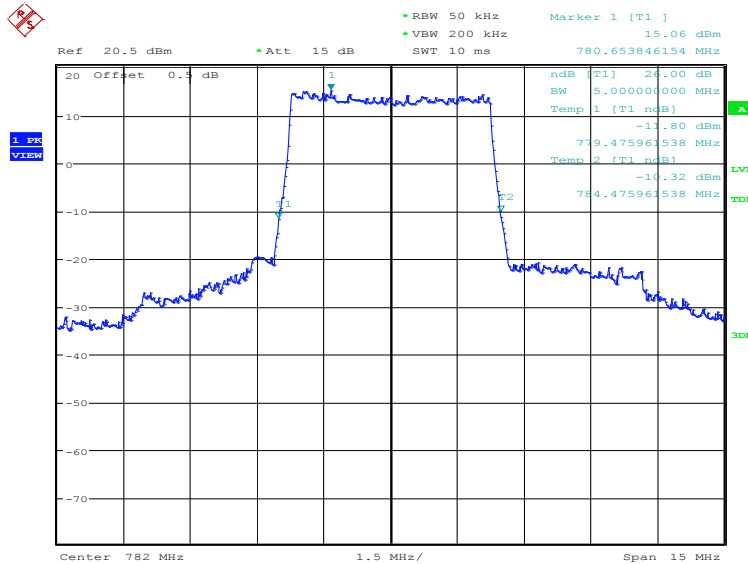
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
782.0	QPSK	16QAM
	5000.00	5000.00

LTE band 13, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:11:45

LTE band 13, 5MHz Bandwidth, 16QAM (-26dBc BW)

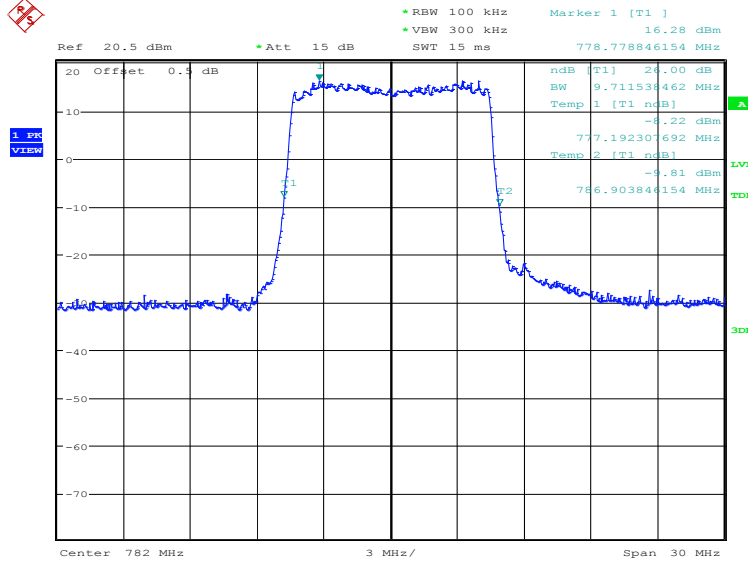


Date: 2.APR.2020 19:13:09

LTE band 13, 10MHz (-26dBc)

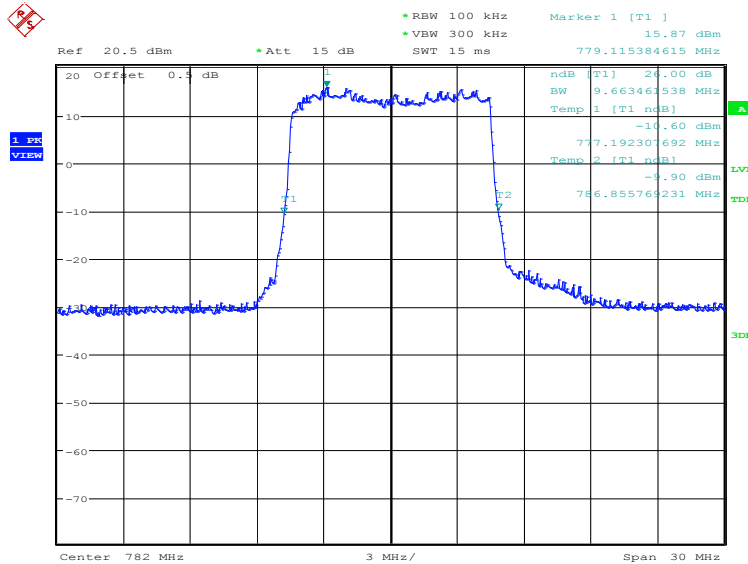
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
782.0	QPSK	16QAM
	9711.54	9663.46

LTE band 13, 10MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:14:36

LTE band 13, 10MHz Bandwidth, 16QAM (-26dBc BW)

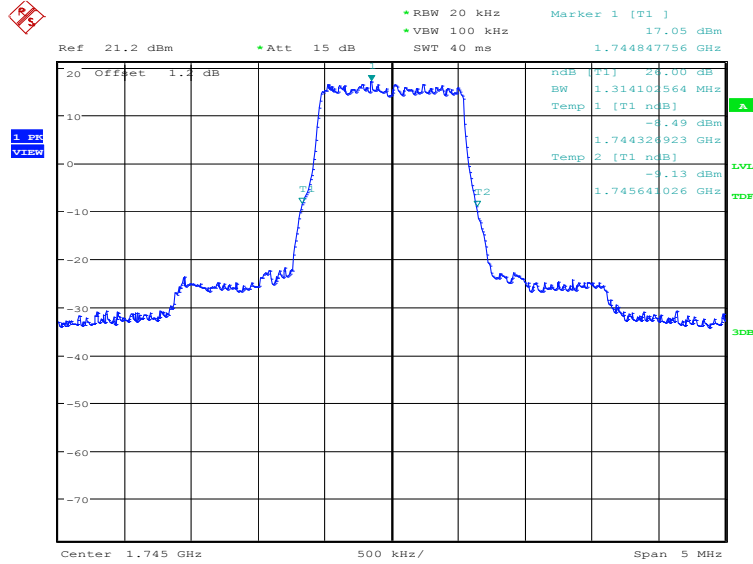


Date: 2.APR.2020 19:16:00

LTE band 66, 1.4MHz (-26dBc)

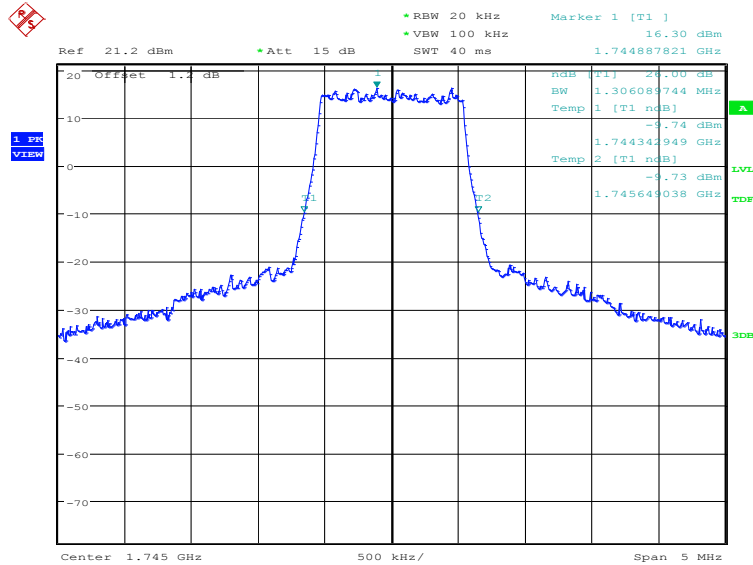
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
	1745.0	QPSK
1314.10		1306.09

LTE band 66, 1.4MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:17:32

LTE band 66, 1.4MHz Bandwidth, 16QAM (-26dBc BW)

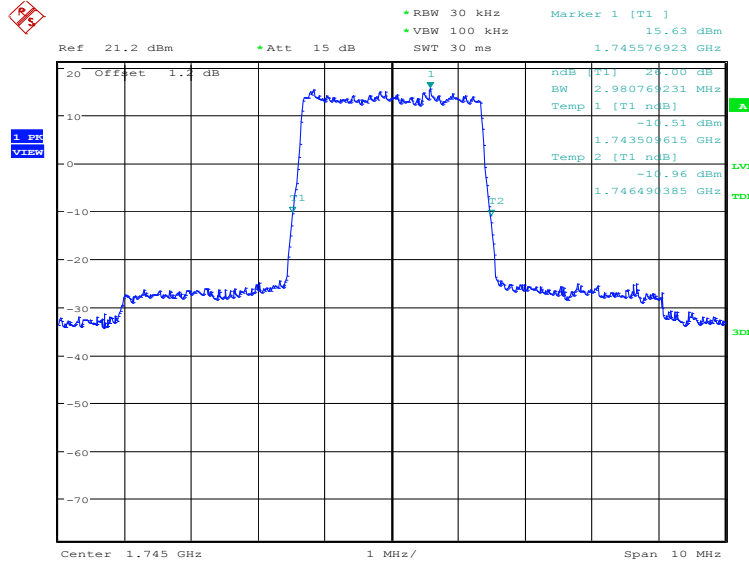


Date: 2.APR.2020 19:18:57

LTE band 66, 3MHz (-26dBc)

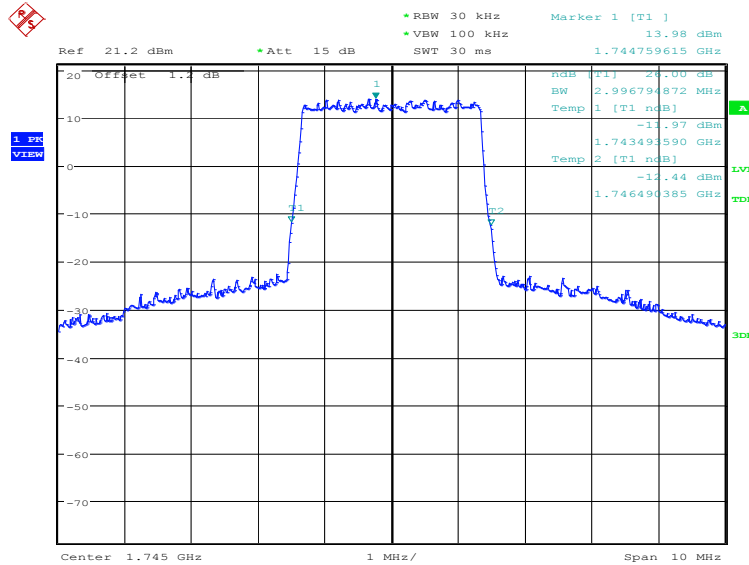
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
	1745.0	QPSK
2980.77		2996.79

LTE band 66, 3MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:20:23

LTE band 66, 3MHz Bandwidth, 16QAM (-26dBc BW)

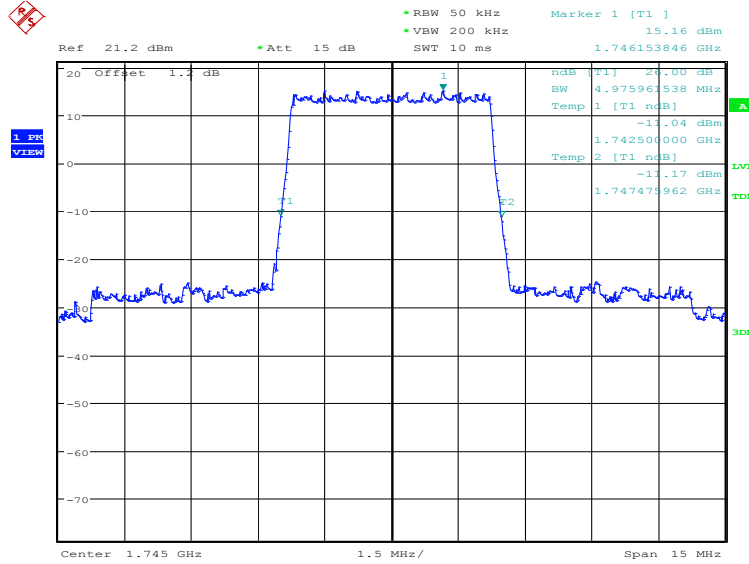


Date: 2.APR.2020 19:21:48

LTE band 66, 5MHz (-26dBc)

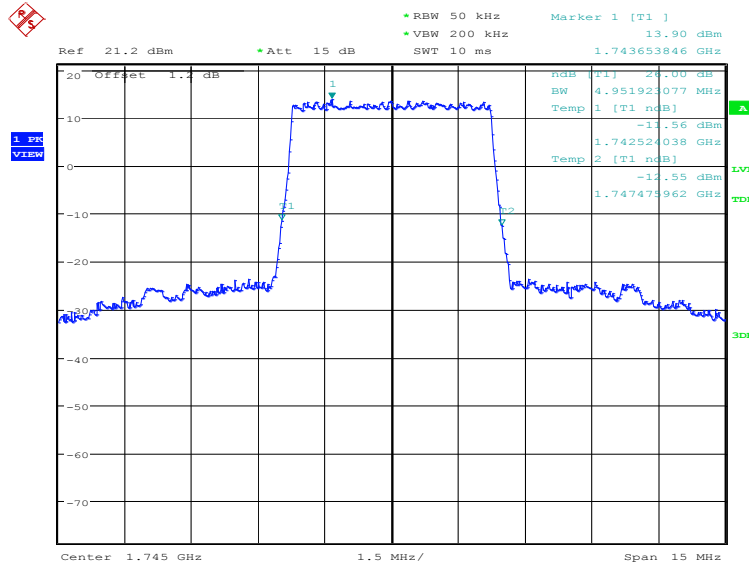
Frequency(MHz)	Occupied Bandwidth (-26dBc) (kHz)	
	1745.0	QPSK
4975.96		4951.92

LTE band 66, 5MHz Bandwidth, QPSK (-26dBc BW)



Date: 2.APR.2020 19:23:14

LTE band 66, 5MHz Bandwidth, 16QAM (-26dBc BW)



Date: 2.APR.2020 19:24:38